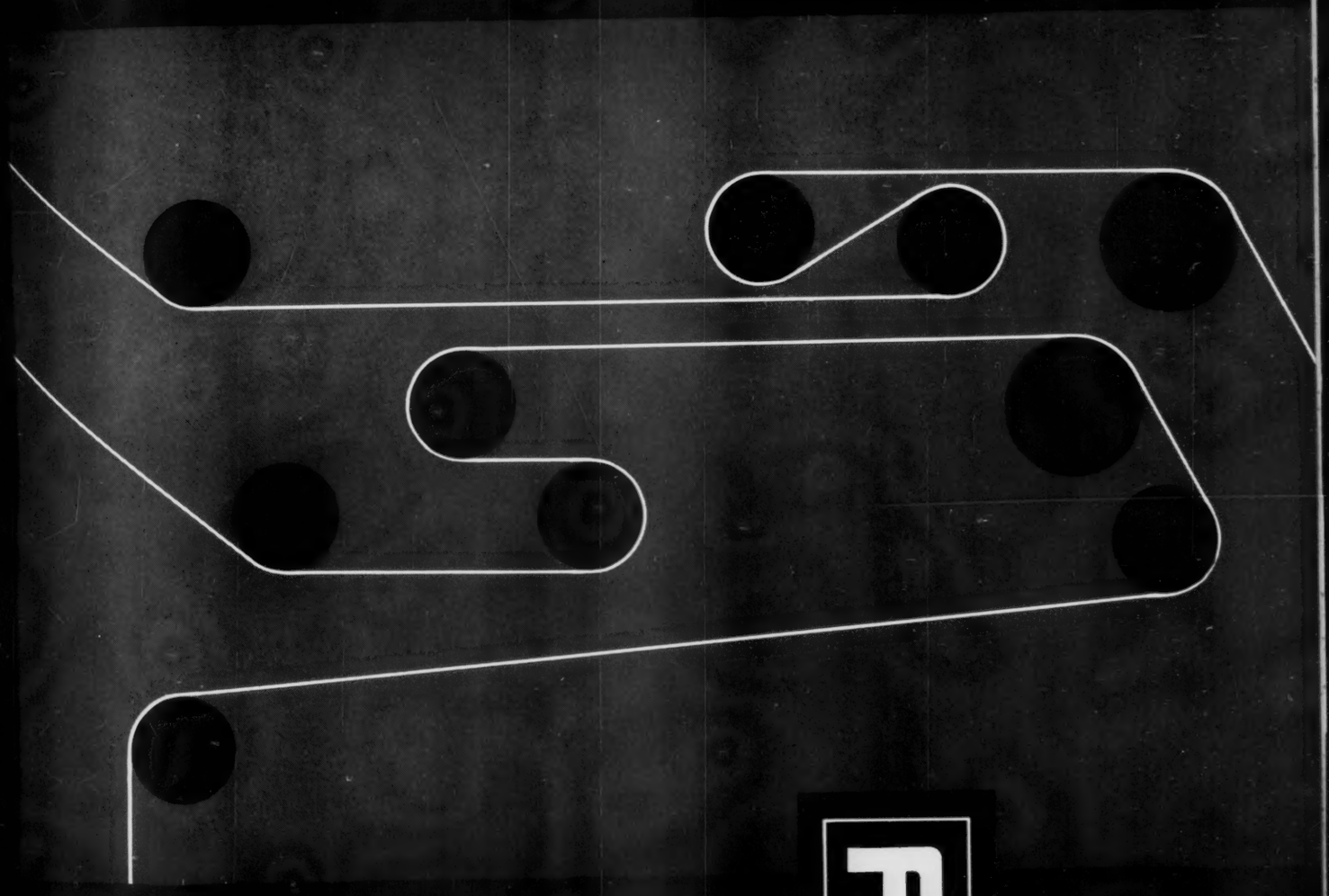
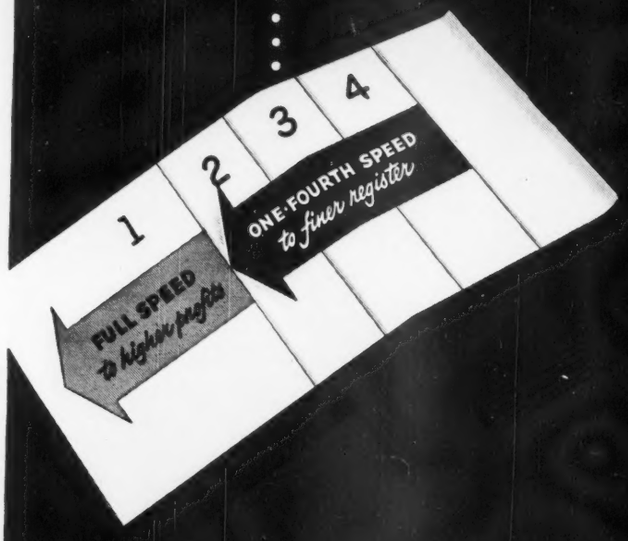
PRINTING EQUIPMENT

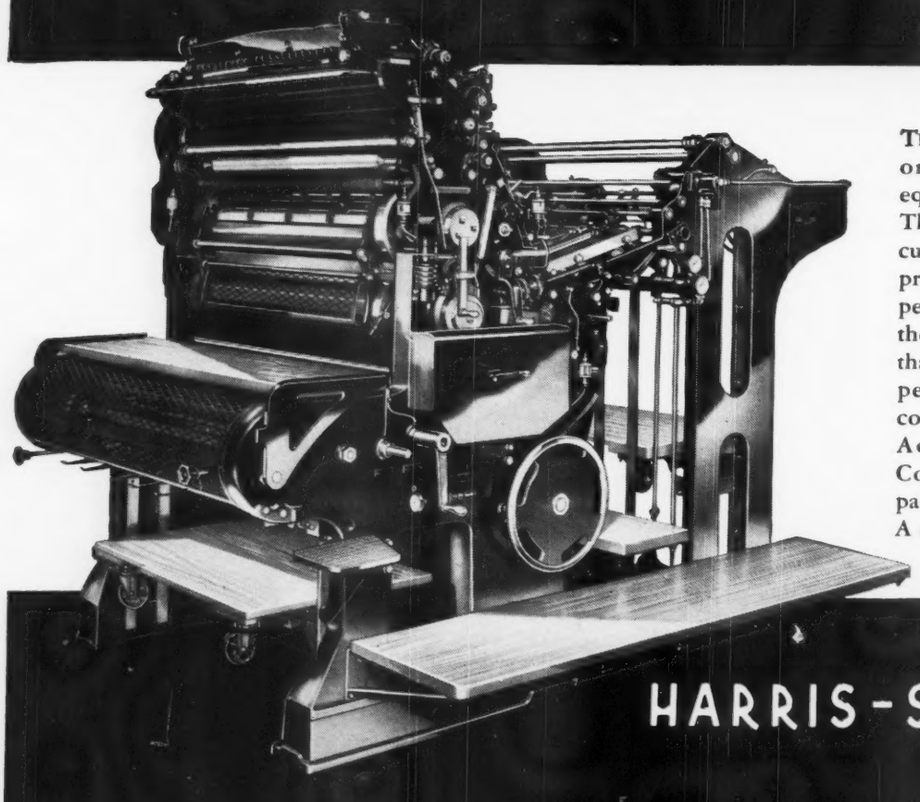


with Harris Stream Feed

Harris stream fed presses take their time when it counts most—*during register.* Stream fed sheets travel down the feed table slower—approximately one quarter the speed of sheets fed by other methods. Three sheets are already on the table, gliding easily toward the front stops. That's why no troublesome slowdown devices are needed—why there's no bounce or nicking of sheets.

When each sheet is registered precisely, *then* it is on its way, accelerating to highest possible speeds. Harris stream feed puts more salable sheets in the delivery pile. It gets presses rolling sooner—keeps them running with fewer interruptions.





THE HARRIS MODEL 134 is the only 22 x 34″ offset press equipped with Stream Feed. That's just one reason for accurate register and finer impressions at speeds up to 6000 per hour. For description of the many other Harris features that deliver *more* salable sheets per day, write for a new, color folder. Ask for "LTN". Address Harris-Seybold Company, Advertising Department, Cleveland 5, Ohio. A card will do.

HARRIS-SEYBOLD

FOR PERFECT ROUTING...

Sta-Hi's new MasteRouter has been acclaimed by stereotypers from coast to coast.

It is compact, sturdily built, completely enclosed to eliminate the hazards and litter of flying metal chips.

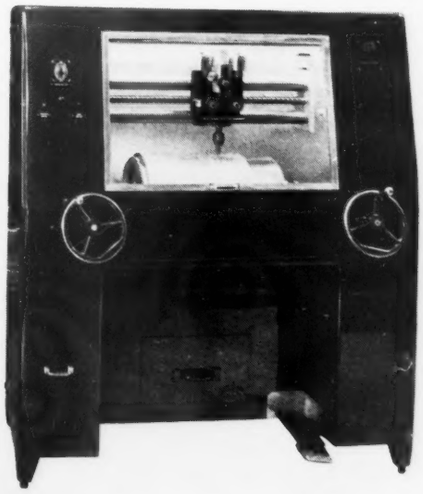
Its rugged, high speed router head, operating on an entirely new principle, does a finished, precision job.

Its exclusive power driven traverse feed makes possible rapid, effortless "stripping" of plates.

Its built in fluorescent lighting system gives perfect glare-proof and shadow-proof illumination of the work.

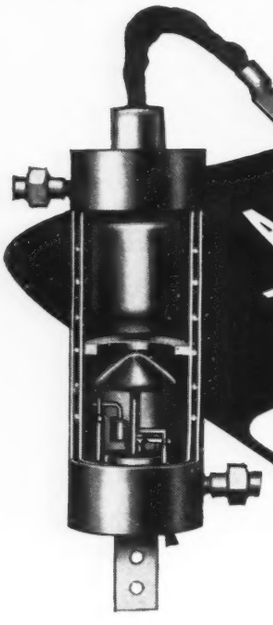
Demand for color in newspapers is on the increase . . . Be prepared to handle it with a MasteRouter! . . . We'll be glad to provide complete details at your request.

STA-HI



STA-HI CORPORATION • 1020 CROCKER ST. • LOS ANGELES 21

ELECTRONIC PRESS DRIVE



A NEW WAY TO PRINT THE NEWS... THROUGH A SIMPLE ELECTRONIC TUBE

The ignitron tube above converts a-c power for d-c drive motors—is the control and power headquarters for the new General Electric electronic press drive. This modern drive provides closer speed control and more flexibility at **less cost,** compared with conventional a-c drives. The drive is designed around the co-ordinated load-center method of power distribution which saves heavy-wiring costs and critical materials.

Power savings alone range from zero at maximum geared speed to 50 per cent at half speed.

Space is saved and maintenance costs reduced because auxiliary threading motor, slow gearing motor, over-running clutch, two-speed gears and drive brakes are eliminated.

Constant running speed is independent of load changes. The G-E electronic press drive has the advantages of stepless speed control from threading speed to maximum speed, with stable shunt-speed regulation at any point.

Smooth jogging and running operations are performed without contactor or switching operations. Control maintenance is reduced to a minimum.

Load resistor losses are eliminated and heat dissipation is no longer a major expense.

Maintenance costs are reduced because no heavy rotating machinery is required. Electronic power and control apparatus is static.

EVERYTHING ELECTRIC FOR THE PRINTING INDUSTRY

Consider the advantages of purchasing all your electric equipment—glue pots to press drives—from General Electric. It will simplify your designing, buying, installation and service problems. All the components of your plant will dovetail together to form an attractive and efficient operation unit. Call or write your local G-E sales office. ***Apparatus Department, General Electric Company, Schenectady 5, N. Y.***

Have you seen the G-E color sound slidefilm "Modern Industrial Power Distribution"—a More Power to America project designed to aid American industry achieve greater productivity. Ask your local G-E office to arrange for its showing in your area.

Apparatus Department, Sec. G658-26
General Electric Company
Schenectady 5, New York

Please send me bulletin GEA-4670 on the new G-E electronic press drive.

Name.....

Paper.....

City.....State.....

GENERAL ELECTRIC

Fred Barnard
The Japanese
The Chinese
and Confucius **were all wrong** .

One picture is *not* worth 1000 words.*

A picture of a Miller Automatic Cylinder Press will not adequately show you its ease of operation, accessibility, speed, or its simplicity.

Nor will even 1,000 words describe the Miller superiority.

One must actually see a modern Miller Press operate to really appreciate its many advantages.

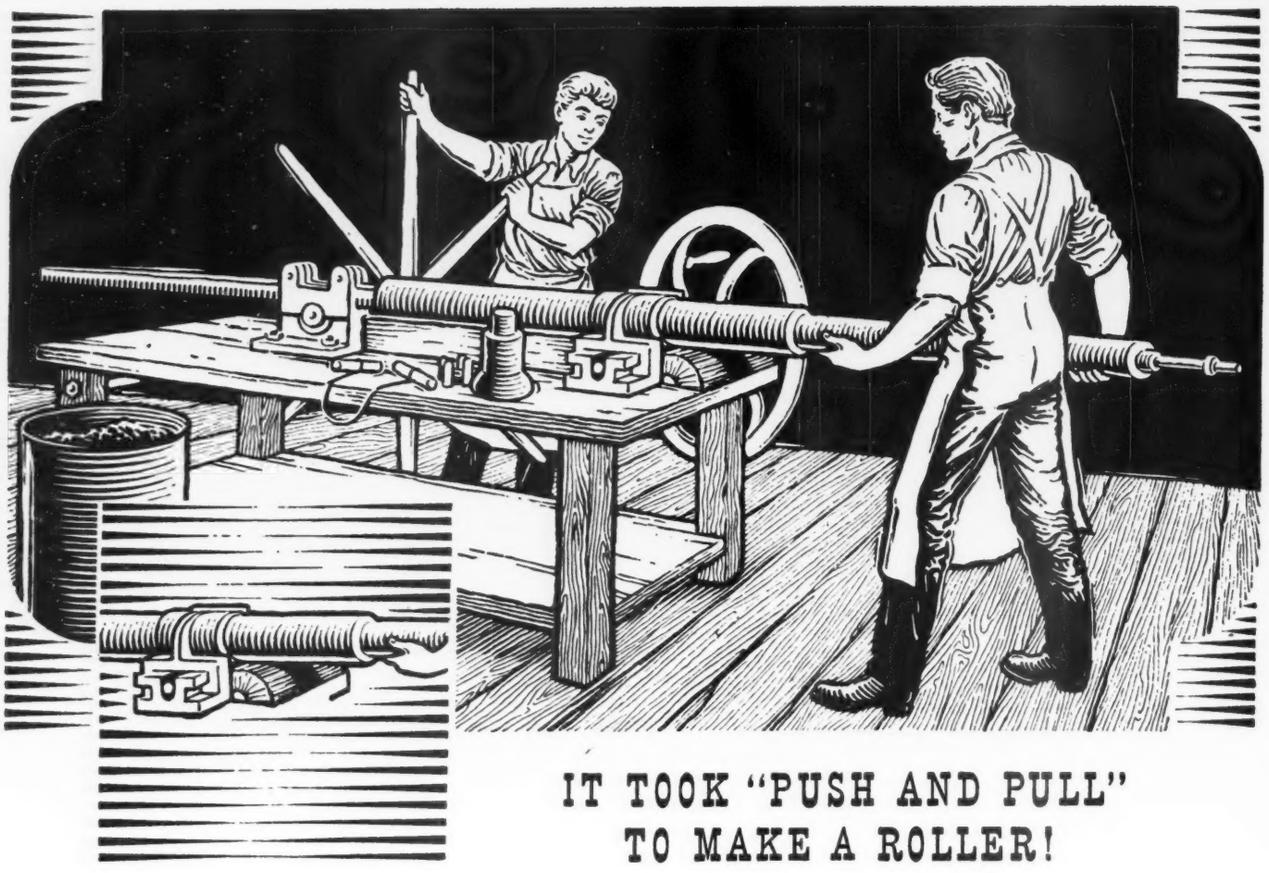
Miller Automatic Presses are preferred by the profit-conscious and competitive-minded printers throughout the world.

Write and let us know of your interest — our sales representative will be pleased to arrange for a demonstration of a Miller Press.

*The oft used quotation, "One picture is worth 1,000 words" has been credited to the Japanese, the Chinese, and to Confucius. However, Fred R. Barnard, a New York advertising man, originated the phrase in 1927, after using a somewhat similar phrase in 1921.
Source: Carnegie Library of Pittsburgh

miller

Miller Printing Machinery Co., Pittsburgh, Pa.



IT TOOK "PUSH AND PULL" TO MAKE A ROLLER!

IN 1847, when Sam'l Bingham opened his first printers' rollers shop, one of the hardest problems of roller making was getting the roller out of the mold. In those days it took a lot of push and pull to extract the tacky glue and molasses roller. Even when it was done carefully, the surface was often marred.

A simple device was needed that would extract the roller from the mold without damaging its surface. Improvement followed improvement. In the shops of Sam'l Bingham the ingenuity of highly skilled workmen began to tell.

A ramrod-and-ratchet machine was an early development. It shoved the roller from the mold. But this machine, too, had its faults. Absolute perfection was still lacking.

As the era of mechanization progressed, the machines in the Sam'l Bingham shops improved. The production of rollers came to depend more on the efficiency of machines, less on the physical strength of men... more on brains, less on brawn.

So that today, over one hundred years later, SAM'L BINGHAM'S SON MFG. CO., with a battery of patented, precision machines in each of 16 centrally located modern factories, produces the *perfect roller*, for the American printing industry, always furnishing "the right roller, right away"!

OVER ONE HUNDRED YEARS OF ROLLER MAKING

FACTORIES

ATLANTA 3
CHICAGO 5
CLEVELAND 14
DALLAS 1
DES MOINES 2
DETROIT 10
HOUSTON 6
INDIANAPOLIS 2

SAM'L BINGHAM'S SON MFG. CO.
MANUFACTURERS OF
PRINTERS' ROLLERS
LITHO-OFFSET ROLLERS

FACTORIES

KALAMAZOO 12
KANSAS CITY 6
MINNEAPOLIS 15
NASHVILLE 3
OKLAHOMA CITY 6
PITTSBURGH 3
ST. LOUIS 2
SPRINGFIELD, O.

MAKERS OF RUBBER • NON-MELTABLE • FABRIC-COVERED • ROTOGRAVURE • OFFSET • COMPOSITION • VARNISH-LACQUER • GRAINING **ROLLERS**

PRINTING EQUIPMENT *Engineer*

Volume 77 Number 1

A technical publication for the mechanical executive responsible for printing production, equipment and supplies in the commercial, magazine, private plant and daily newspaper field.

PRINTING EQUIPMENT Engineer, Published monthly at 1276 West Third St., Cleveland 13, Ohio, Copyright 1948 by Willsea Publishing Co.

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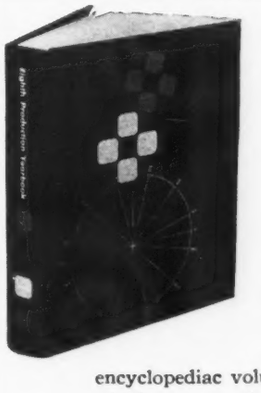


A VALUABLE BOOK

FOR MECHANICAL AND PRODUCTION EXECUTIVES

The *VIIIth Graphic Arts Production Year Book* should be in the hands of every mechanical and production executive. Commercial and newspaper printing plant executives, will find this encyclopediac volume of constant help to them. A mass of detail which no executive can keep in mind will be found in this book.

Printing plant executives supposedly have a comprehensive overall knowledge about printing and fabricating process questions which come up frequently.

Eight Sections—1. Art and photography; 2. Photo-engraving; 3. Electrotypes and Duplicate plates; 4. Paper; 5. Printing processes; 6. Binding and mailing; 7. Typography; 8. Buyers' guide and indexes.

Size, 8½ in. by 11¼ in.; 700 pages with 900 illustrations with many beautiful color inserts by all processes. Bound in gray crash cover.

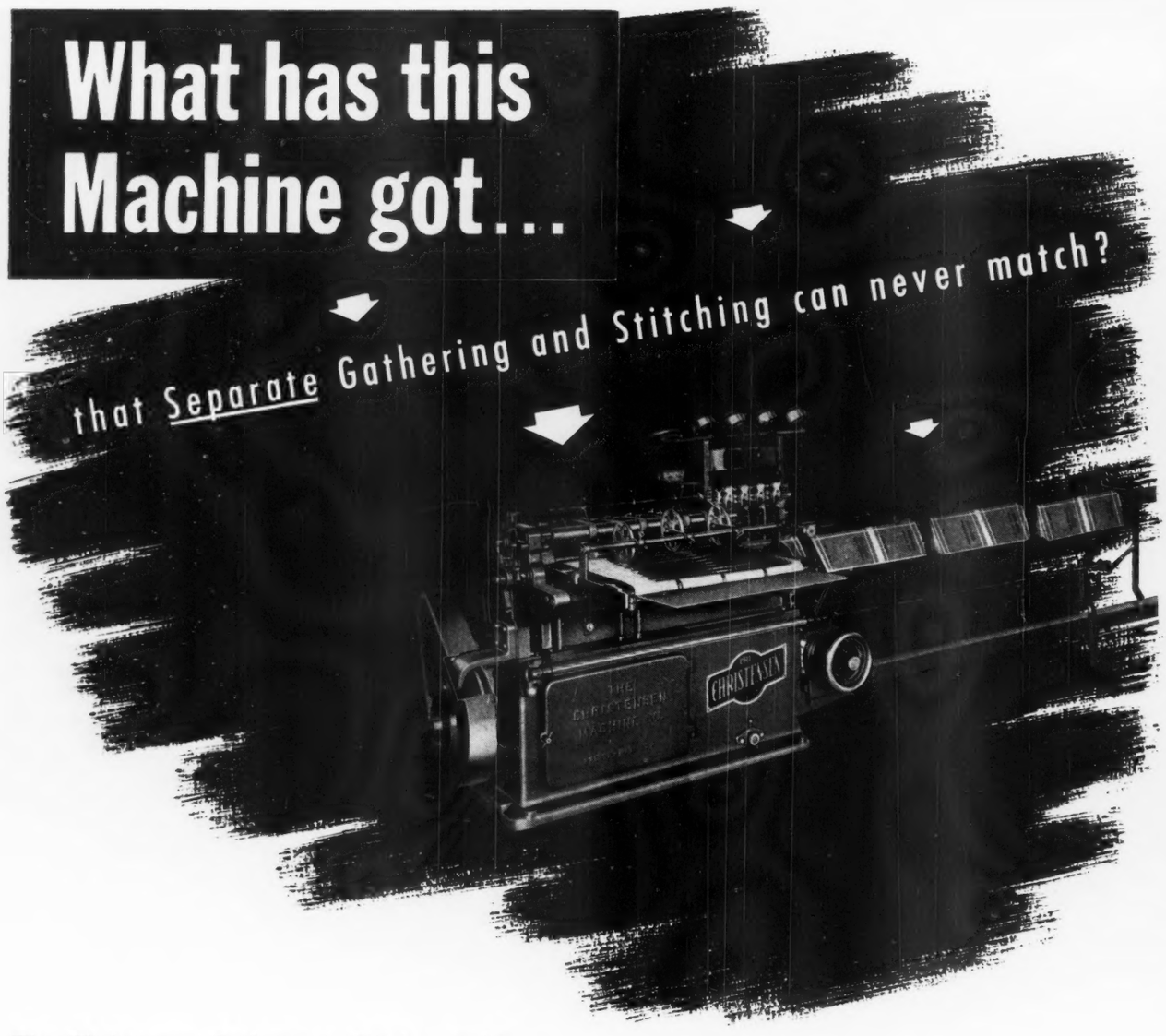
PRICE $15.50 per copy, please send remittance with order

PRINTING EQUIPMENT *Engineer*

1276 WEST THIRD STREET • CLEVELAND 13, OHIO

What has this Machine got...

that Separate Gathering and Stitching can never match?



The Christensen Gatherer & Stitcher tackles a giant job as cheerfully as a small one and whatever the length, sees it through with unvarying accuracy to the last booklet, pamphlet or magazine.

It replaces three or four single stitchers and delivers precision saddle wire and gang work as fast as operators can feed it.

Adjustment is so easy that the machine is quickly adapted from one job to the next—and is profitably used on small runs as well as large.

Gripper control assures fine uniformity in stitching . . . and the average operator can learn to run the Christensen Gatherer & Stitcher in a comparatively short time.

We'd like to send you interesting data showing how this great Christensen Machine may boost your bindery production, delivering better work—in much less time—and at far lower cost per thousand units.

May we send you information also on other Christensen and Dexter Equipment that serves in pressroom and bindery?

Dexter and Christensen Machines

All Dexter and Christensen Products are sold and serviced by

Dexter Folder Company • General Sales Offices, 330 West 42nd Street, New York 18, N. Y.

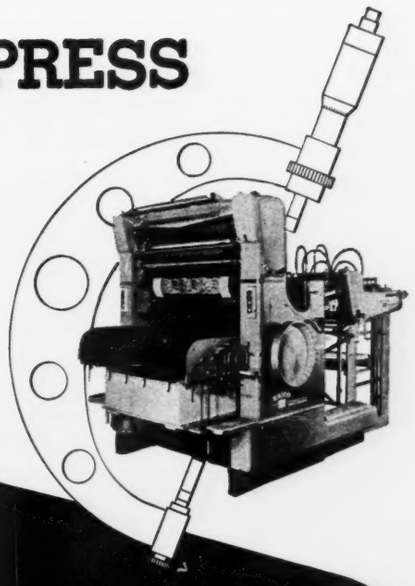
SALES REPRESENTATIVES: Chicago, Philadelphia, Boston, Cleveland, Washington, St. Louis

AGENTS: Dallas, Denver, San Francisco, Los Angeles, Seattle, Toronto, Montreal, Winnipeg . . . and in Foreign Countries

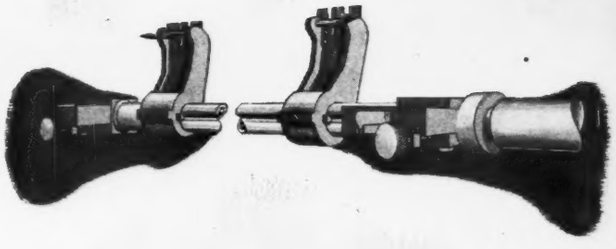
DEXTER Machines are built by Dexter Folder Company at Pearl River, N. Y.
CHRISTENSEN Machines are built by Christensen Machine Company at Racine, Wisc.

EBCO

OFFSET PRESS



Registers with Lithographers



Unique patented front guides quickly and accurately adjustable for fast get-away. Positive absence-of-sheet and out-of-register sheet detectors incorporated in each front guide mechanism.

THIS IS ONLY ONE OF THE MANY IMPORTANT FEATURES

EBCO

FOR COMPLETE DETAILS SEND FOR BOOKLET. CLIP THIS COUPON TO YOUR LETTERHEAD.

PRINTING MACHINERY DIVISION
ELECTRIC BOAT COMPANY
445 PARK AVENUE, NEW YORK 22, NEW YORK
400 WEST MADISON STREET, CHICAGO 6, ILLINOIS
RUSS BUILDING, SAN FRANCISCO 4, CALIFORNIA

"5 million impressions in 7 months" on his NEW ATF LITTLE GIANT

"I have found," says Arly Feasler, Rochester, N. Y., printer, "that my new ATF Little Giant will *'really produce'* at 3500 to 4000 impressions per hour on any type of stock from onion skin to 4-ply board." Actual shop experience by scores of printers proves the new ATF Little Giant can handle 87% of all commercial jobs within its size, with job cylinder-press quality, at less than automatic platen-press cost. Ask your ATF Salesman for full information.

Sheet sizes from 3¼x5½ to 12x18 Largest printing form—11¾x17½

American Type Founders

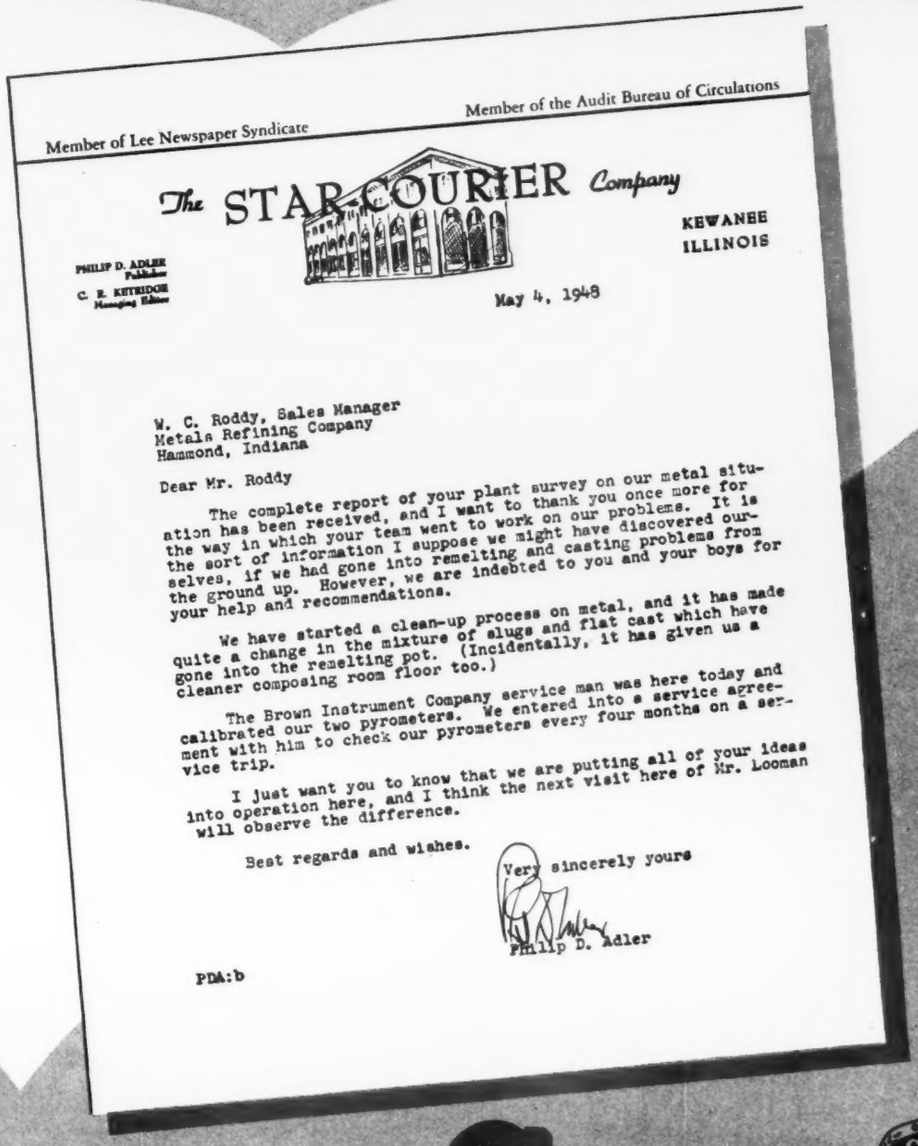
200 Elmora Avenue, Elizabeth B, New Jersey

BRANCHES IN PRINCIPAL CITIES

Glidden

. . . pacemaker in QUALITY TYPE METAL

. . . sets the pace in TYPE METAL SERVICE



Member of Lee Newspaper Syndicate — Member of the Audit Bureau of Circulations

The STAR-COURIER Company

KEWANEE
ILLINOIS

PHILIP D. ADLER, Publisher
C. R. KETRIDGE, Managing Editor

May 4, 1948

W. C. Roddy, Sales Manager
Metals Refining Company
Hammond, Indiana

Dear Mr. Roddy

The complete report of your plant survey on our metal situation has been received, and I want to thank you once more for the way in which your team went to work on our problems. It is the sort of information I suppose we might have discovered ourselves, if we had gone into remelting and casting problems from the ground up. However, we are indebted to you and your boys for your help and recommendations.

We have started a clean-up process on metal, and it has made quite a change in the mixture of slugs and flat cast which have gone into the remelting pot. (Incidentally, it has given us a cleaner composing room floor too.)

The Brown Instrument Company service man was here today and calibrated our two pyrometers. We entered into a service agreement with him to check our pyrometers every four months on a service trip.

I just want you to know that we are putting all of your ideas into operation here, and I think the next visit here of Mr. Looman will observe the difference.

Best regards and wishes.

Very sincerely yours

Philip D. Adler

PDA:b

Glidden service available to all newspaper plants . . . no charge or obligation involved. Factual information on this service upon request.

QUALITY Glidden PRODUCTS

Glidden

FINE TYPE METAL

METALS REFINING COMPANY
Division of The Glidden Company
HAMMOND, INDIANA
Stocks in principal cities

WHEN

Fuel costs
Make-overs
Dross losses

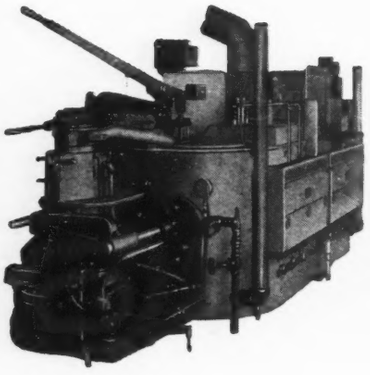
} RUN TOO HIGH

THEN

Cut them all with KEMP Immersion-Fired Melting

You will save on fuel bills whether you are now using gas or electricity. 40% is the normal economy of gas over electricity for the same number of heat units . . . also the normal economy of the Kemp carburetor, burner, and heating method over any other gas-fired system.

You get better casting because the metal is held more accurately to casting temperature. Recovery is quick when new metal is added because the large heating elements are *inside* the metal, not *outside* the pot.



You save metal because you reduce dross. Part of the spent gases from the burner are directed over the surface of the molten metal to keep air away and reduce oxidation. It's as simple as 1-2-3: less air . . . less oxidation . . . less dross!

Over 500 KEMP installations are proving their efficiency now in stereo or electro plants throughout the country. We can tell you where to see one, or we can send you copies of users' records.

THIS POT CUT DROSS LOSSES 18% . . .

for a large eastern daily which operates two stereo rooms in two plants — one with KEMP immersion-gas-fired pots (like the 12-ton unit shown), the other with electrically heated pots. Because the spent products of combustion from a KEMP pot blanket the metal, the stereo room on gas boasts 18% less dross per 10,000 plates (15,500 lbs. per year versus 18,250 lbs.). Here's clear proof of just one of KEMP'S six advantages in stereo and electro work: precise temperature, more production, reduced cost, less work, better work, better working conditions.

KEMP OF BALTIMORE

PRECISION CARBURETION ◇ ADAPTED COMBUSTION FOR INDUSTRY'S HEAT USING PROCESSES
ATMOSPHERE GENERATION ◇ ABSORPTIVE DRYER SYSTEMS FOR PROCESS CONTROL AND PROTECTION

JMLcoK-BB2pe

THE C. M. KEMP MFG. CO.
405 E. Oliver St., Baltimore 2, Md.

Send me your Bulletin IE-10 on Stereotype and Electrotype melting .....

We cast ..... plates per day. We'd like to save 40%, too. Get in touch with us.....

NAME .....

POSITION .....

COMPANY .....

PLACE .....

Somewhere West of Laramie
SOMEWHERE west of Laramie there's a bronco-busting, steer-roping girl who knows what I'm talking about.
She can tell what a sassy pony, that's a cross between greased lightning and the place where it hits, can do with eleven hundred pounds of steel and action when he's going high, wide and handsome.
The truth is—the Playboy was built for her.
Built for the lass whose face is brown with the sun when the day is done of revel and romp and race.
She loves the cross of the wild and the tame.
There's a savor of links about that car—of laughter and lilt and light—a hint of old lover—and saddle and quirt. It's a brawny thing—yet a graceful thing for the sweep o' the Avenue.
Step into the Playboy when the hour grows dull with things gone dead and stale.
Then start for the land of real living with the spirit of the lass who rides, lean and rangy, into the red horizon of a Wyoming twilight.
JORDAN
JORDAN MOTOR CAR COMPANY
Chrysler develops another first
the Safety Level-Ride
...SOFTEST, SMOOTHEST, SAFEST RIDE IN HISTORY PROVES ONCE AGAIN: "YOU GET THE GOOD THINGS FIRST FROM CHRYSLER!"
the Beautiful Chrysler
LEARN ABOUT THE SAFETY LEVEL-RIDE FROM YOUR CHRYSLER-PLYMOUTH DEALER

The character of automobile advertising may change, but . . .

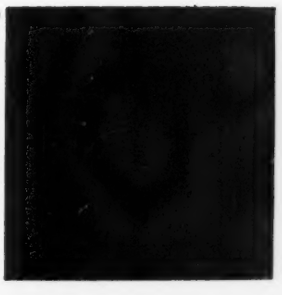
. . . good printing will always be an asset to good publishing and good salesmanship in print.

You *know* printing ink affects the quality of printed results. It affects the ease with which a paper is read by its readers, and the satisfaction with which it is read by its advertisers.

Into the making of our news inks . . . black and colored, for web presses and sheet-fed presses . . . go years of experience . . . and knowledge derived from a sustained research program which today continues its probing for technical advancement.

Why not put this knowledge and experience to work on your printing ink problem?

IPI, Division of Interchemical Corporation, 350 Fifth Avenue, New York 1, N. Y.

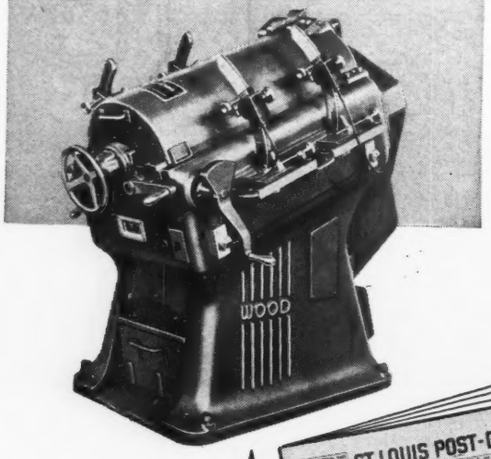


AT LAST!

MULTIPLE COLOR PRINTING IN DAILY NEWSPAPERS BECOMES A SIMPLE, ROUTINE, PROFITABLE OPERATION

THE WOOD COLOR PLATE PRE-REGISTERING MACHINE

. . . keeps the registering of plates in the Stereotype Department. The printing press is, therefore, free to perform its natural function . . . to produce papers. Thus the PRE-REGISTERING Machine proves to be an economical investment by making the printing press available for its normal function during the registering period.



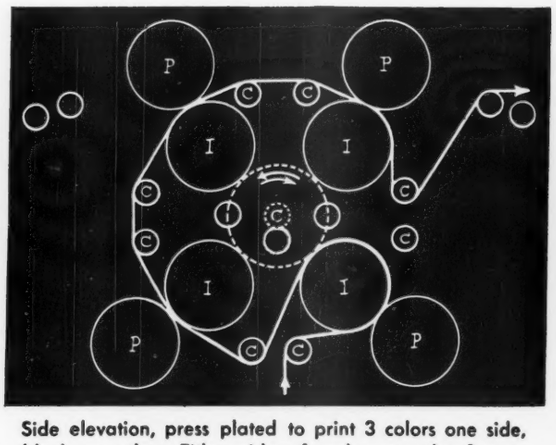
One of the first great dailies to use this WOOD equipment for color in regular editions.

...more ... than is ... for black ...

New ... features ... advantages of ... new WOOD Unit:

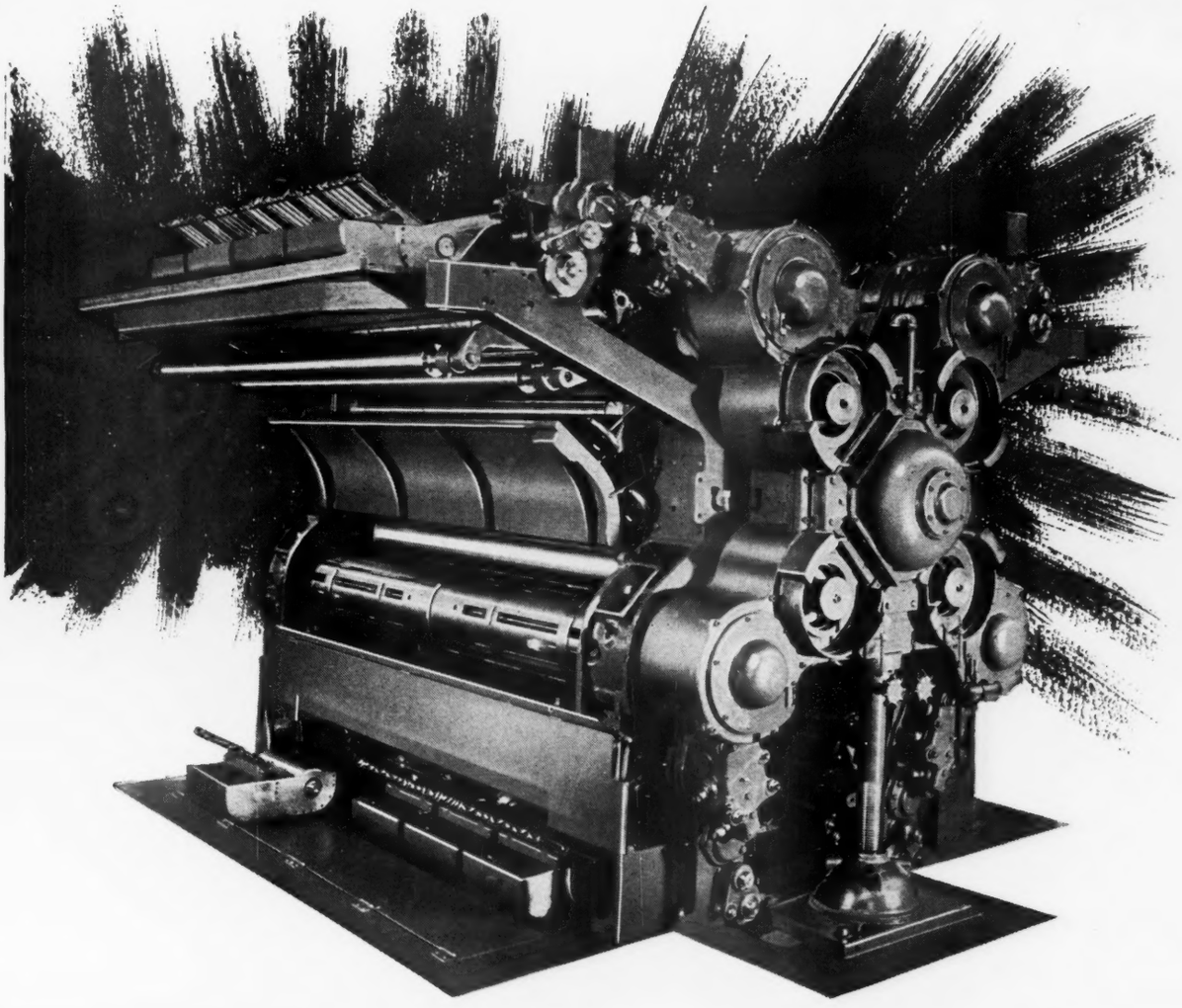
- **Short leads ... ze possibility of web-stretching and mis-register.**
- **Color and black cylinders are controlled by single gear, lessening backlash and torsion, inherent in long drive shafts.**
- **Four individual readily accessible color fountains can be removed and replaced in a jiffy, facilitating washups and change of colors.**
- **Color units can be used also for black . . . need not stand idle when no color is running.**
- **Each individual couple is reversible, giving greater flexibility of color position.**

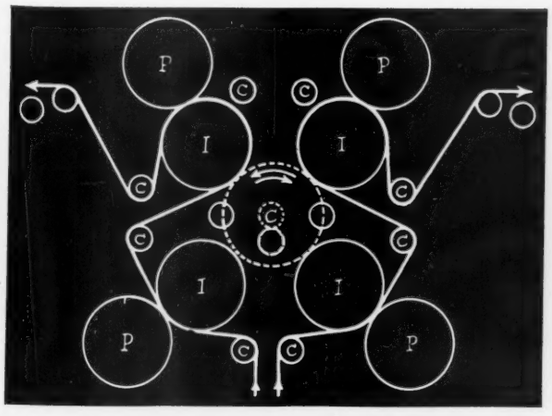
WITH THIS WOOD COMBINATION, UP TO FOUR COLORS IN REGULAR EDITIONS ARE HANDLED WITH UTMOST FACILITY AND SPEED.



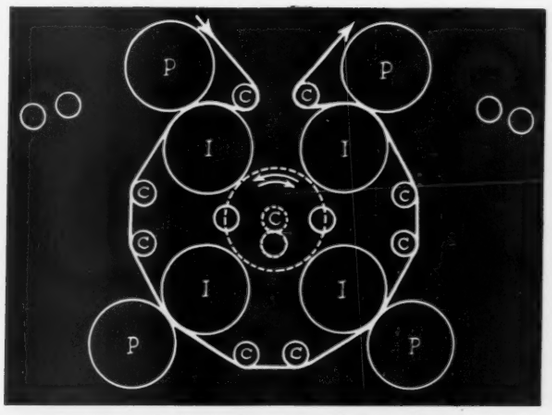
Side elevation, press plated to print 3 colors one side, black on other. Either side of web can take first or second impression.

IF IT'S Wood IT'S GOOD





Press arranged to print two webs, 2 sides of sheet, each in black only.



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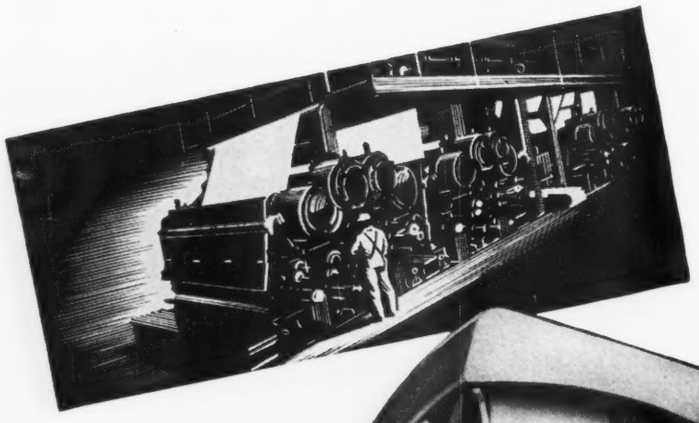

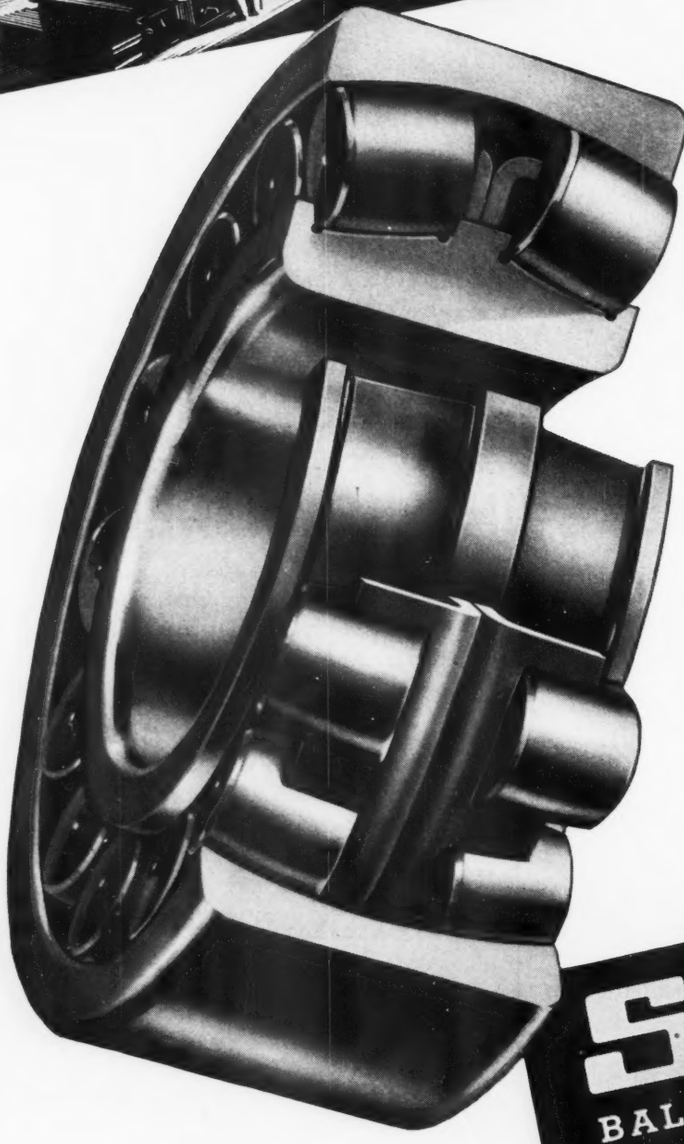

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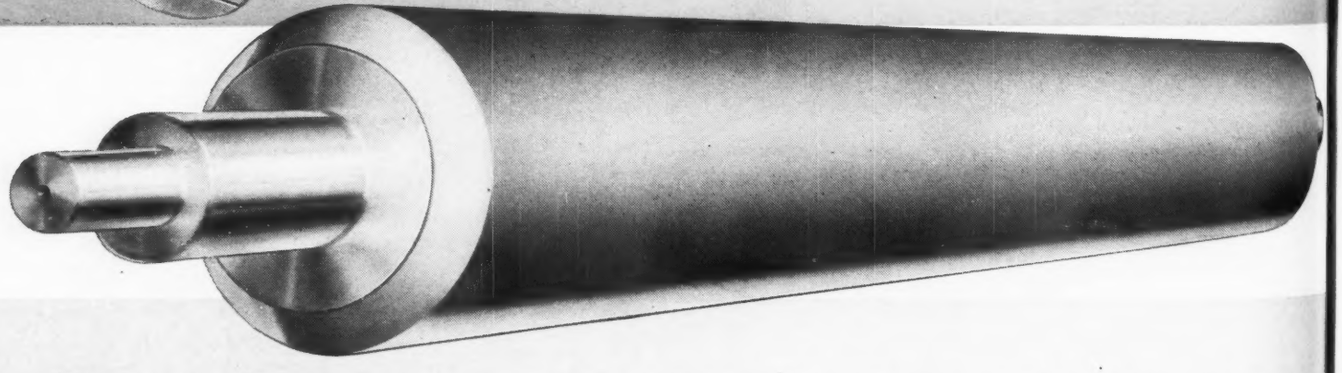

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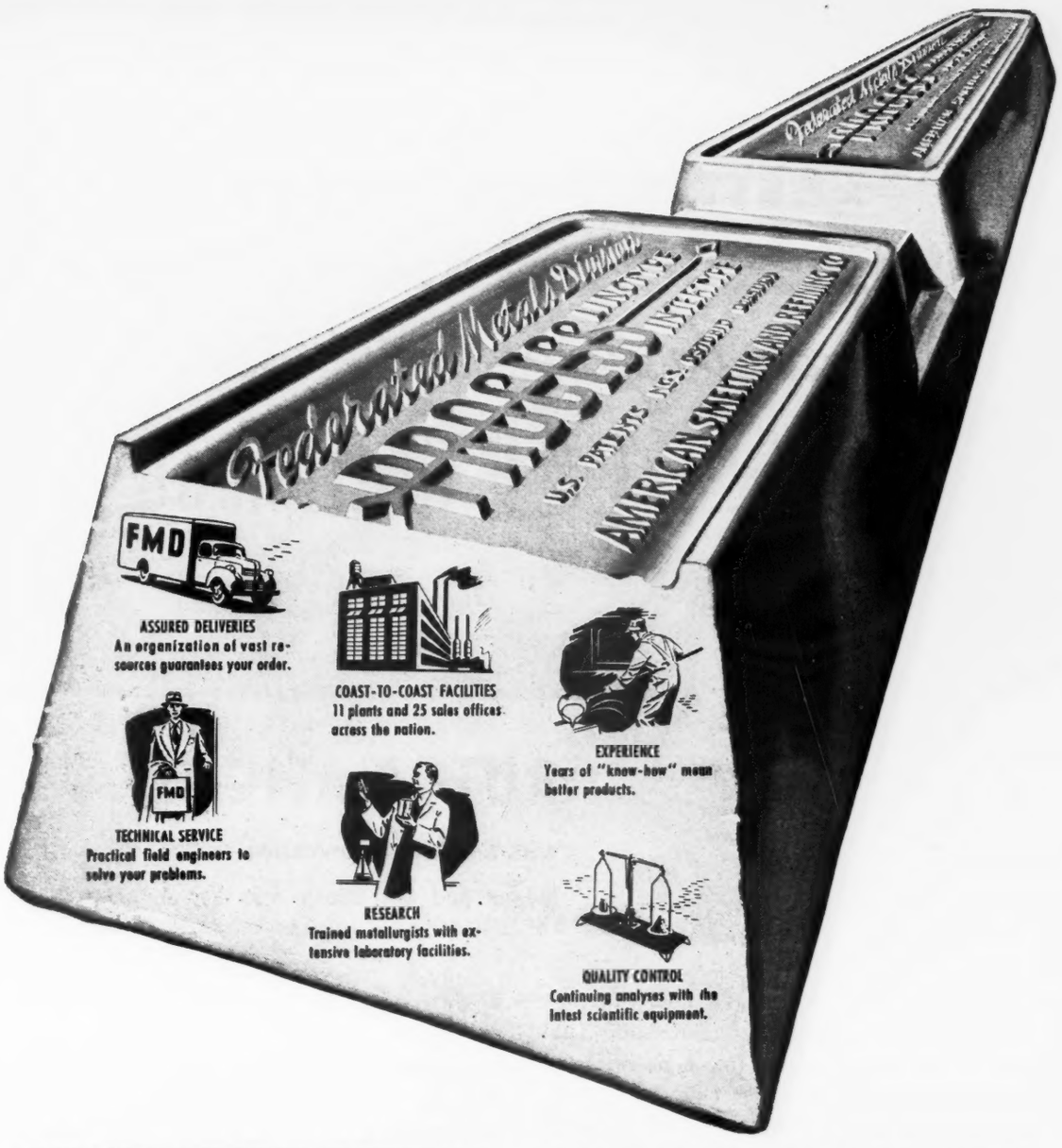
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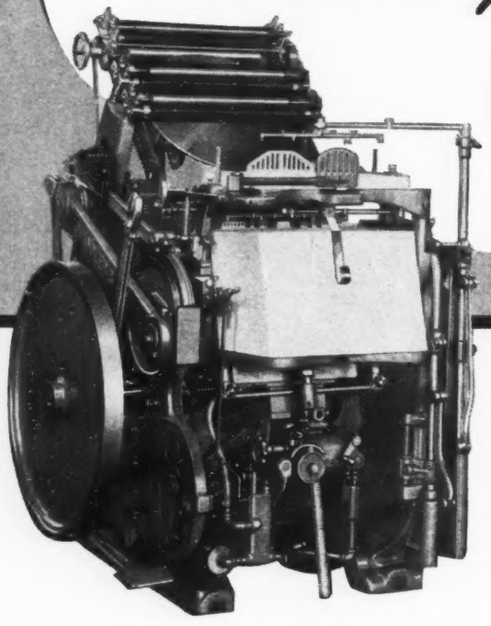

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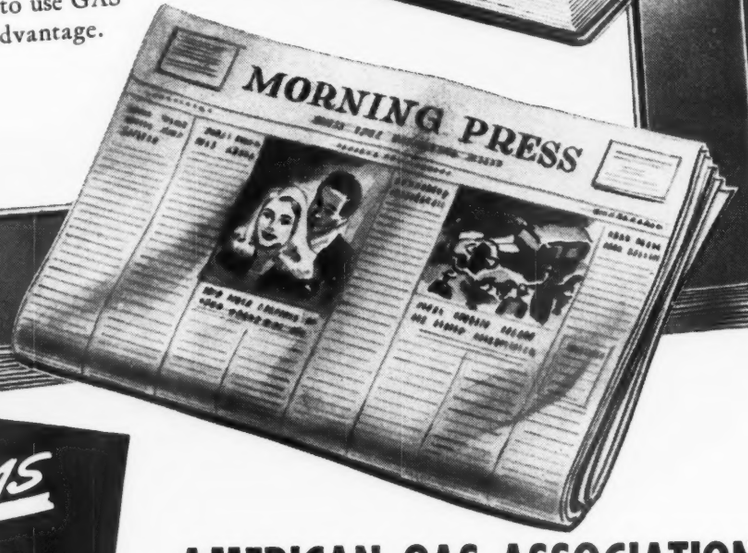

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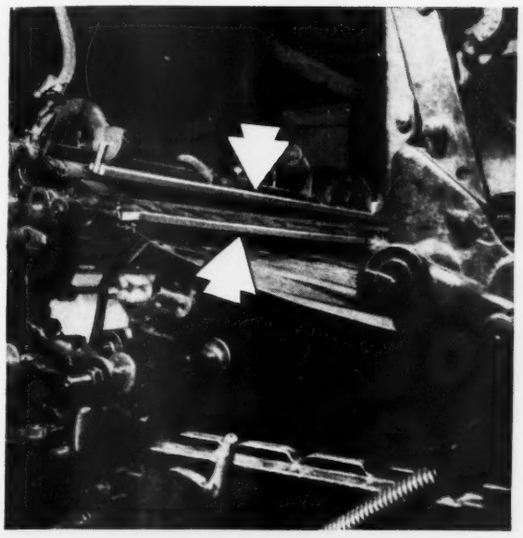

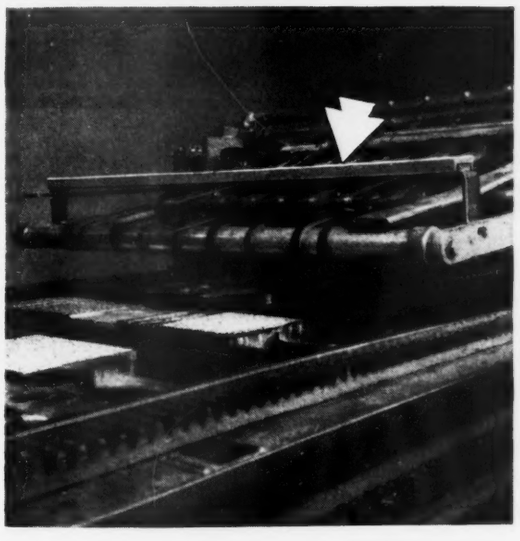

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Since the installations were made on the Miehles, there have been no delivery choke-ups or delays due to static. Piling is straight. The Vandercook must run from one proof up to three hundred or more proofs of a single form. After passing between the Ionotrons on the delivery end of this press, the proofs pile up in a neat, even stack — *static-free.*

The Ionotron eliminates static in a simple, unique way. The bar contains a self-activating source of continuous radiation. This radiation ionizes the air adjacent to the stock and "bleeds-off" static charges before they can cause trouble. It has no flame, no electric connection, and nothing touches the work. The active life of the Ionotron is far longer than that of any equipment in the shop. Installation is simple, and there is no maintenance except wiping the bar occasionally.

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( ) Attached are details of our static problem on ..... (Type of press)

Name ..... Title .....

Company .....

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City ..... Zone ..... State .....

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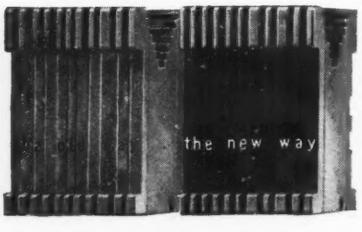

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Colored Comics Reproduced by Rotogravure

in the plant of the St. Louis Post-Dispatch *— Interesting technical details about cylinder production*

By Dr. R. R. VOORHEES

YEARS of experimentation and research were required before the St. Louis *Post-Dispatch* became the first newspaper in the world to apply successfully the rotogravure process to the printing of its two-section, 12 or 16 page Sunday colored comic section. To do this it was necessary to start from scratch and devise a new method of cylinder making, technical procedure and in chemical composition of adhesives and inks, details in some instances being closely guarded secrets. In this article, *Printing Equipment Engineer* is able to give the first authentic account of the procedure written from data obtained directly from the mechanical staff of the St. Louis *Post-Dispatch*.

Printing the Sunday comic sections of the *Post-Dispatch* in colors by the rotogravure process was the idea of Frank E. Yetter, Superintendent of the rotogravure plant. He began experimental work in 1936. Clifford Newby, his assistant, collaborated in the developmental work.

During the intervening years when the experimentation and research was going on, Charles J. Hentschell became Production Manager of the *Post-Dispatch*. Mr. Hentschell immediately saw the tremendous prestige possibilities and got behind the idea with all of his boundless energy and enthusiasm with the result that there was never a moment when Mr. Hentschell was not pushing for Sunday colored comics in rotogravure. Mr. Yetter gives great credit to Mr. Hentschell for the final achievement.

With that fine team spirit so evident in all of the mechanical staff of the *Post-Dispatch*, Yetter states this development is not a one-man achievement but credit belongs to the whole staff.

The First Problem

When the initial experimentation was started in 1936 special copy was furnished but it was realized, after some two years of this sort of work that a fresh start would have to be made from scratch. The initial effort to work out this technique demonstrated that if the project were to be licked it would have to be licked with the material that was available. Hentschell insisted that the *Post-Dispatch* just couldn't go to the syndicates and agencies supplying material for Sunday colored comic sections and demand special copy just so the newspaper could print its section by the rotogravure process. The newspaper definitely would have received a curt reply to such a request. Cooperation with subscribing newspapers isn't quite that elastic.

Aspirin Tablets Helped

In 1938 the staff began to work with what every other subscribing newspaper gets—stereotype mats and nothing else. Taking each set of four-color mats, that is the key (black) mat and the three color (red, yellow and blue) mats, experimentation and research was resumed to try to devise some method by means of which the rotogravure process could be applied to the reproduction of the comic section. Two years time and countless aspirin tablets were required before the process was worked out.

Another Problem—The Press

With the process now satisfactorily worked out, a new problem was presented. The rotogravure plant of the *Post-Dispatch* had no press that could back up the sheet immediately after the first side had been printed. It had presses that could print four colors on one side but that was all. So from 1940 until 1946 the whole idea was put on ice. But in September 1946 a new R. Hoe & Co. 12 unit rotogravure press was installed in the *Post-Dispatch* rotogravure plant. Then the new process was taken out of storage and put into use.

The First Press Run

When the erecting engineer from R. Hoe & Co. had completed the installation of the new rotogravure press it was decided to go ahead and attempt the first run of the new rotogravure comic section without even as much as a trial or two. Hoe's erecting engineer, not quite used to such complete confidence, was somewhat flabbergasted that the *Post-Dispatch* was willing to take what seemed like such a long chance. After all, a costly new press was going into its first run with cylinders made by a new technique on a turnover sheet and a collect run without even as much as a preliminary warm-up. The only concession made (as a sort of insurance just in case) was to allow three extra days to make the deadline for the first rotogravure-printed Sunday comic section. On the first run the press was started without proofing or re-etching of any of the cylinders, with Clarence Keller, press foreman of both the *Post-Dispatch's* downtown plant as well as of the roto plant, in charge. The run was completed without a delay of any kind. The three days allowed for insurance against delays were unused. On that first run, of course, the press was operated at reduced speed in keeping with standard practice. But there was nothing different in that first run from the runs being made today except that now the press is speeded up to normal printing capacity.

Processing the Mats

Now for the process. The syndicated stereotype mats are received in sets of four—one for the key plate (black) and the other three for the red, yellow and blue colors. The first step in the process is to send the mats to the stereotype de-

Resumes Annual Exhibition

THE American Institute of Graphic Arts announces the revival of its annual series of exhibitions of Printing for Commerce to take place between January 9 and 22, 1949, under the Chairmanship of Will Burton, Art Director of Fortune Magazine.

The best examples of commercial printing and design will be selected to form the exhibit that may be viewed at the Architectural League, New York, and then will tour selected cities through the countries.

Additional information may be obtained by writing to the American Institute, 115 E. 40th St., New York 16, N. Y.

partment where a shell cast is made from each mat. There is nothing different in making these shell casts than if they were to be used in the usual way for the printing of the colored comic section. But after the casts are made the procedure is completely different. Incidentally, right here it might be mentioned that enthusiasm for the new process during its incubation days extended to the stereotype department where A. Ehrhardt, superintendent of the department, followed through most carefully.

Proofing the Shell Casts

The flat shell casts in sets of four are sent to the Photo-Engraving Department, in charge of Superintendent Henry J. Kirchmer ably assisted by Lorin Nevling. Here each set of four shell casts is proofed on transparent Cellophane. For this proofing, a Vandercook proof press is used. It proofs on one side by direct impression and on the reverse side by offset. Thus the image on each side of the four proofs are in register. No special cellophane is used—just the regular transparent commercial Cellophane stock.

Bronzing Cellophane Proofs

Immediately after each proof is pulled and while the ink still is moist, it is taken to a dusting box where it is dusted with gold bronze powder. The proofs are dusted by means of a wad of cotton, carefully applying the gold bronze powder to both sides of the proof. In the dusting of the proofs, care is taken to make certain that all parts of the proof are completely covered.

After dusting with the bronze powder, each proof is removed to an adjoining dusting box where they are dusted with talc to remove the surplus gold bronze powder. After dusting with talc, the proofs are removed to still another dusting box, adjoining the previously used box. Here another wad of cotton is used to remove the talc that hasn't been removed in the second dusting box when the proofs were being dusted to remove the excess gold bronze powder.

After this operation the proofs are taken to an adjoining shadow box where one by one they are laid down on the glass and cleaned again with a wad of clean cotton. Both sides are cleaned. They are then inspected with a small magnifying glass to make certain that all inked portions have been completely covered with gold bronze powder and that the entire proof has been thoroughly cleaned of excess talc or other particles. The proofs are now ready for further processing.

Right here it should be mentioned, perhaps, that the reason for proofing on both sides and also the reason for dusting with gold bronze powder is to give the proofs opacity in the printed areas.

The ink used in pulling the proofs on cellophane was specially developed for the purpose by Mr. Yetter and his associates after three years of experimentation work. The available ink didn't give the required results when proofing on Cellophane.

The Dusting Unit

It might be of interest to note at this point that the dusting with gold bronze powder and the cleaning with talc is done in a single unit divided into three dusting boxes. Each dusting box is separated from the others and each has its own exhaust to remove flying particles of gold bronze and talc that might otherwise annoy the operator or float into the room proper.

After the Cellophane proofs have been dusted, cleaned and inspected, they are then sent flat (in sets of four) to the rotogravure plant located in another part of St. Louis.

Mounting Proof on Support

Because of the character of the Cellophane on which these proofs are taken, it would be impossible for the engraver to work with and register them. There is not sufficient rigidity in the Cellophane

Some of the Steps Employed in Assembling Page Proofs for Printing Down Upon Carbon Tissue in Plant of St. Louis *Post-Dispatch* for the Rotogravure-Printed Sunday Color Comic Section. These brief descriptions make the steps appear to be simple in accomplishment. Considerable skill is required in this work.

1.—First step in preparing the rotogravure cylinders is to make stereotype shell casts from the mats received from the syndicate. Shell casts are mounted on patent base in the press bed as shown in the illustration. Proof of the shell cast stereotype plates is then taken on a Vandercook proof press. In the illustration can be seen a representative Cellophane proof upon which the comics are printed; the impression cylinder has made a partial revolution. Special ink is used for taking the proof. Before pulling the Cellophane proof, the operator turns over the press to imprint the inked plate image directly on the cylinder tympan. With the press returned to normal position, the sheet of Cellophane is then fed into the press, thus printing the image on both sides of the Cellophane—one impression being printed direct from the plates and the other offset to the Cellophane from the impression cylinder. The reason for the double printed proof is explained in succeeding pictures.

2.—Three-Part Dusting Box is shown in this illustration. As will be seen, each dusting box is separated from the others and each is supplied with its own exhaust (terminating in a common duct) to remove flying particles of gold bronze and/or talc which might be inhaled by the operator, float out into the room, or adhere to the proof.

3.—While this picture shows Cellophane proof of an advertisement, it is representative of all comic proofs take on Cellophane for the *Post-Dispatch* Sunday comic section.

4.—The Cellophane proof, with the ink still wet, is taken to the dusting box. With cotton, the operator dusts gold bronze powder on the wet ink on both sides of the proof. The reason for dusting the proofs with the gold bronze powder is to make them as opaque as possible and consequently obtain as near perfect reproduction in the printing cylinder.

5.—After dusting with gold bronze powder, the operator places the proof in an adjoining box or tray and with a wad of cotton dusts the proof with talc. This dusting removes all surplus gold bronze powder.

6.—The proof is now transferred to still another adjoining box or tray in the dusting unit. The glass bottomed tray is illuminated underneath to permit critical inspection of the proof. The operator employs another wad of cotton to remove any particles of talc from both sides of the proof which might have remained after dusting in the previous box. The proof is then inspected with a small magnifying glass to make certain that all parts of the inked image have been completely covered with gold bronze powder.

7.—After the Cellophane color proofs have been taken and have been dusted and inspected, each one is mounted on a sheet of transparent celluloid. A special transparent varnish is used to mount the Cellophane proof on the celluloid sheet. The varnish serves only as an adhesive and is applied by spraying. Proof is carefully squeegeed to eliminate air bubbles. Offset side of the Cellophane proof is placed next to the celluloid, with the direct-proof side out.

The Cellophane color proofs which have been mounted on the celluloid sheets are now each laid on a separate glass plate ($\frac{3}{16}$ in. thick and 18 in. by 24 in. width), Cellophane proof next to the glass plate. Four conventional register marks (one each top and bottom and one at either side) are etched in the glass plate. First, the black or key proof is fastened to the glass plate with short lengths of transparent Scotch tape. The red, yellow and blue color proofs receive the same treatment. One of two 2 in. pieces of manila gummed paper (shown in the illustration) are applied to the lower edge of the glass plate. On these manila pieces are marked the position of this particular page on the press cylinder with other necessary directions for the cylinder lay-down man.

8.—The color proofs are matched one by one with the black or key proof. This is done by superimposing the color proofs over the key proof. This operation is performed with the proofs resting on the top of an illuminated shadow box. When registry of the images has been obtained, lead weights are put on the second glass plate to hold it firmly in place.

9.—To aid in securing coincidence of the register marks of the black or key proof with the color proofs, a hollow brass tube is used. This tube is 1 in. diam. with a $\frac{3}{16}$ in. diam. hole in one end and a $\frac{7}{8}$ in. hole in the other. By looking through the smaller hole, the platemaker is enabled to secure exact coincidence of the register marks on the respective glass plates.

When the foregoing steps have been completed on each set of four color proofs making up a page, they are then sent to the carbon tissue printing room where they are printed down upon the tissue. The processed carbon tissue is then transferred or laid down upon the copper surfaced press cylinder in the conventional manner, after which the cylinders are etched.

to permit this. So the first step in the rotogravure plant is to mount each of the four proofs that constitute a set on its own sheet of transparent photographic celluloid. This celluloid is 0.005 in. thick. A special transparent plastic varnish is used for this mounting, the varnish serving only as an adhesive. The varnish was developed by Mr. Yetter especially for this process. The varnish is sprayed onto the sheet of celluloid, as thin a coating as possible being applied. A single Cellophane proof is then put on the sheet of celluloid while the varnish is still wet and carefully squeezed so that perfect adhesion is obtained and all air bubbles removed. The varnish used is a slow drying type made with a highly volatile solvent. In mounting a Cellophane proof on the sheet of celluloid it is fastened with the offset side of the proof in contact with the celluloid and the direct-proof side out. The mounting of the Cellophane proofs on sheets of celluloid provides the necessary rigidity so the proofs may be worked.

Preliminary Work on Plate Glass

The starting point and the guide for the rest of the procedure is the proof of the page size key plate. This proof which

MID-WEST MANAGER FOR P-DOUBLE-E

EUGENE A. POWERS is the new Mid-West Manager for *Printing Equipment Engineer*. He succeeds the late Everett Bloomster who represented this publication in the Mid-West Territory for the past

14 years. His office is at 232 East Erie St., Chicago 11, Ill. Phone number is SUperior 2444. Mr. Powers will be pleased to be of immediate assistance to anyone with respect to information of any kind about *Printing Equipment Engineer*.

Mr. Powers is 37 years of age, is married and lives at 415 Fullerton Parkway, Chicago 14. He was graduated from New Trier Township High School and attended the University of Wisconsin. He saw service in the army in the recent war and was discharged a first lieutenant after a Jap ambush put an end to his army career in 1944.

He has been connected with F. W. Dodge Corp. and with Industrial Pub. Co.

has been mounted on transparent celluloid, is then laid on plate glass measuring 3/16 in. thick and 18 in. by 24 in. in length and width. The plate glass support has the four conventional register marks, one at the top and bottom and one on either side. The celluloid mounted proof of the key plate is laid on the plate glass. With more or less equal margins all around, it is fastened to the glass plate by means of small lengths of transparent Scotch tape. The Scotch tape is applied to the edge but not all around. Just enough is used to hold the celluloid-mounted Cellophane key proof securely to the glass plate. A piece or two, about 2 in. long, of ordinary manila gummed paper is then applied to the glass outside the celluloid and on these is marked the position of that plate on the press cylinder, which end is the top and such directions as for instance, the color and page number that are necessary for identification in the pressroom.

The mounting of the celluloid-backed Cellophane proof of the key plate on the glass plate is done on a shadow box. In mounting, the Cellophane side is put next to the glass with the celluloid side out. Then, after the taping down of the re-enforced proof, another plate glass of the same thickness and size and supporting one of the color pages, is laid on the plate glass to which the key proof has been fastened. Like the other sheet of plate glass, four conventional register marks are etched in the upper and lower areas and at either side.

Registering the Pages

This second glass plate containing the color plate image is then registered with the first glass plate. When registry of the images has been obtained, lead weights are put on the second glass plate along the four sides to hold it firmly in place and prevent shifting. To aid in registering these two glass plates, a hollow brass tube about 12 in. long is used. This tube, about 1 in. dia. is closed at both ends but with a small hole in one end measuring 1/8 in. dia. and a larger hole in the other end measuring 3/4 in. dia. By placing one end of this brass tube over a register mark with the larger hole on the glass and looking through the smaller hole, exact coincidence of the register marks is obtained.

Correcting Mis-Register

Stereo mats have a most unhappy habit of shrinking and stretching. In the case of colored comics, this results in considerable off-register, present in the best of comic sections printed by the conventional methods. In this rotogravure process of printing colored comics, this condition is corrected. This correction is done as the three color proofs are processed.

With the second glass plate on top of the first and with the celluloid-mounted Cellophane key plate proof between the two glass plates, the next step is to process the three color proofs. One of the three color proofs that belong with the key plate already mounted on a glass plate is then laid on top of the second sheet of glass again with the Cellophane side to the glass and the celluloid side out. This color proof is moved into register with the key plate to determine if there is any shrinkage or stretching in the mat from which the cast was made that was used to produce the proof. If the register is satisfactory, which indicates that there was no stretching or shrinkage, then that mounted proof is fastened to the glass plate with pieces of Scotch tape in the manner previously described. In doing this, of course, care is used to make certain that the two glass plates do not get out of register and also that the color proof doesn't get out of register with the key plate proof.

Slitting Cellophane Proofs

In many instances, if not in all, it will be found that there was some shrinkage or stretching in the mat with the result that perfect register is unobtainable between the color proof and its key plate. There will be places that are off register because the color spots do not meet the lines they should or else they extend a trifle beyond the lines. To remedy this and achieve register, the color proof is cut. The cutting is done where it is possible to cut or slit and not according to any straight-line rule. In every color proof there will be found "non-printing" spaces (up to this stage in the process) where a cut can be made and thus one piece shifted slightly to provide greater or lesser coverage to obtain register. In cutting these color proofs it is necessary at times to make several slits in different directions. It all is dependent upon where the color proof is off register and also on the spotting of the color on the proof. But the color proof is cut wherever necessary and the sections are slightly shifted until the entire color proof is in register with its key plate proof. When that has been obtained, this color proof is fastened to the plate glass on which it is resting by means of pieces of Scotch tape in the manner previously described. That operation completed and press directions indicated on short pieces of manila gummed paper, the color proof is completed. The same process is repeated with the remaining two color proofs, this makes the three color proofs and its key proof (each mounted on its sheet of plate glass) in register with each other. The processing of the proofs is now complete. This procedure is repeated for all of the pages that go to make up the 12 or 16 page two section Sunday colored comic section.

Printing Down on Carbon Tissue

When all of the forms for the section have been made up according to this procedure, the forms go to the carbon tissue printing room for the next step. Here we run into another closely guarded secret. A special printing process, using special screens and printing on carbon tissue is used. This special printing process as well as the special screens that are used were all developed in the *Post-Dispatch* rotogravure plant. The carbon tissue is transfered to the cylinders in the conventional way.

When the cylinders are on the press, the printing is done in the conventional way, there being no innovations or changes in the actual printing process.

It will be recalled that when the first run was shot it was shot without proofing or re-etching of any of the cylinders or any parts of the cylinders. Since then it has been found necessary at times to re-etch some parts of some cylinders just as is done in conventional rotogravure work. But this happens only about one a month and only with parts of some cylinders. On the average, not more than two or three hours of re-etching is done in a month. This Sunday colored comic section is now printed at full press speed.

Patents have been applied for on certain details of the process.

Technical Discussions

at Photo-Lithographers' Convention in Cincinnati includes air conditioning, aptitude and color tests and job control in small plant

By A. G. FEGERT

TECHNICAL problems connected with the operation of lithographic printing plants were considered from two viewpoints at the 16th annual convention of the National Association of Photo-Lithographers, Netherland Plaza Hotel, Cincinnati, September 15 through 18. One of the methods of considering them was by means of addresses and penels, or clinics, at which speakers talked about processes and methods of procedure, and the other means was by the exhibits—many of them in action—which manufacturers and dealers held in rooms adjoining the convention hall.

Direct entrance to the Hall of Mirrors, in which the speechmaking took place, was blocked so that participants were obliged to approach the meeting place the long way around, upstairs, from the gallery so that they could not help but see that live exhibitions were part of the convention. It was the exhibits feature that was largely responsible for the delay in opening convention sessions because so many of the registrants were interested in the working displays of machines, supplies and services so that they lingered after the opening time of the sessions.

The convention got under way Wednesday afternoon after John Hennegan, vice president of the Miami Valley Lithographers Asso. gave the speech welcoming the 850 registrants to Cincinnati and Charles E. Mallet of Boston, president of NPLA, responded by referring to the advances which have been made by the lithographic process of reproduction.

LITHO CRAFTSMAN OF 1948

PROFESSOR Robert F. Reed, consultant, connected with the research department of the Lithographic Technical Foundation in Chicago, was honored by the convention of the National Association of Photo-Lithographers by being cited as the Litho Craftsman of 1948 because of his contributions to scientific knowledge to the lithographic industry. The engrossed certificate was presented to Professor Reed by President Charles E. Mallet of NPLA during the convention in Cincinnati, September 15-18.

Keep Equipment in Operation

The first address given at the Wednesday session was by A. J. Fay, National Process Co., Clifton, N. J., on *Heading Up a Sales Program*, in which he warned the audience that the industry was faced with prospects of declining sales volume, and the big question of management was to obtain enough volume of profitable business to keep equipment in continuous operation. He indicated that the industry was in a position to maintain its present volume and also increase sales "if we capitalize on the natural competitive advantages of our process." He suggested four things to do. The first was, seeing to it that sound policies were maintained by which sales and manufacturing were integrated. His second was that harmonious relations between management and employees should be maintained. The third was to build up a sales staff with top notch personnel. The fourth was that the sales manager must see to it that team work prevails and honest effort is rewarded.

Air Conditioning in Lithography

Russell R. Gannon, president of the company bearing his name in Cincinnati, speaking on *Air Conditioning in Lithography*, said that lithographers, like farmers, must fight the weather. Unlike the farmer who can only talk about it, the lithographer can use air-conditioning to aid him in his conflict and keep right on in his operations.

Mr. Gannon indicated that the term, *air-conditioning* is misused, and defined true air-conditioning as including:

Controlling it's temperature;
Controlling the amount of moisture content—or relative humidity
Controlling the amount of foreign matter or dirt
Controlling its motion, that is the direction and velocity of motion

"Unless all four of these factors are controlled, we do not have a true air conditioning system," said Mr. Gannon.

In his definitions, he said that "relative humidity is ratio of moisture content in a given air volume compared to the total amount of moisture this same air volume could hold at a given temperature if it were completely saturated," and "absolute humidity is the actual amount of moisture content in a given volume of air irrespective of its temperature." He said relative humidity will vary as the temperature varies.

Applying the idea to the lithographic industry, he said that relative humidity "affects the sensitivity of light-sensitive-plate-coatings either of a surfaced type or deep-etched," and that in the press-

EXHIBITORS

At Convention of National Association of Photo-Lithographers, Netherlands-Plaza Hotel, Cincinnati, September 15 through 18:

American Type Founders Sales Corp.
Ansco, Div. of General Aniline & Film Corporation
Russell Ernest Baum, Inc.
Sam'l Bingham's Son Mfg. Co.
Bourges, Inc.
Bridgeport Engravers Supply Co.
Champion Paper and Fibre Co.
Chemco Photoproducts Co., Inc.
Consolidated Photo-Engravers Equipment Co.
Ralph C. Coxhead Corp.
Craftsman Line-Up Table Corp.
E. I. DuPont de Nemours & Co.
Eastman Kodak Co.
Electron Lithoplate Corp.
Electronic Mechanical Products Co.
Fuchs & Lang, General Printing Ink Div., Sun Chemical Corp.
Arthur H. Gaebel, Inc.
Godfrey Roller Co.
The Haloid Co.
Harris-Seybold Co.
Philip A. Hunt Co.
Ideal Roller & Mfg. Co., Inc.
International Printing Ink Division, Interchemical Corp.
E. P. Lawson Co., Inc.
Macbeth Arc Lamp Co.
Mallinkrodt Chemical Works
McKinley Litho Supply Co., Inc.
George Murphy, Inc.
Norman-Willets Graphic Supply Co.
Nygren-Dahly Co.
Phillips & Jacobs
Roberts & Porter, Inc.
Harold M. Pitman Co.
R. R. Robertson Co., Inc.
Rutherford Machinery Div., Sun Chemical Corp.
Sinclair & Valentine Co.
Strong Electric Corp.
The Takk Corp.
Vandercook & Sons, Inc.
Zarkin Machine Co., Inc.

room, relative humidity affects the size of paper and its flatness.

He referred to relative humidity in the photographic finishing room, where it will affect film sizes and also the comfort of the operator to the point that where "one drop of perspiration on a negative or positive or on a press plate is likely to ruin it."

Mr. Gannon described two methods of controlling relative humidity, one being the chemical method of dehumidifying which is used to control relative humidity under 50 deg., the chemicals used being effective in drying the atmosphere with the aid of heat. He said that when it is necessary to add moisture to the atmosphere the most practical method is by introducing steam into the air, or warm water "onto an evaporative surface." He mentioned that "buildings which were constructed 20 to 30 years ago were not designed for present-day processes which require the use of manufactured weather."

Employee Relations

Three addresses on relations with employees constituted the program for the Thursday sessions, besides an address by Don Black, president, Lithographic Technical Foundation, and the showing of the new motion picture of Harris-Seybold Co. titled, *A Better Run for Your Money*, promoting the idea of utilizing the lithographic process for producing advertising literature.

Walter E. Soderstrom, executive secretary, National Association of Photo-Lithographers, in his address on *Lithographic Labor Relations* said that it is a sad day when any union uses its economic power to enforce demands of its leaders. He advocated the use of fair methods of negotiation by and between employers and authorized representatives of the employees and the use of arbitration methods in cases of disagreement. He related difficulties in negotiating contracts with labor unions and indicated that neither employers nor employees can afford to become arbitrary in their approach to solution of problems affecting relations between them. He urged that an agreed course of training should be applied to apprentices indentured in the industry, and that before they are selected for the industry they should be subjected to aptitude tests to determine their possible capabilities.

Aptitude Tests

Jack Klein president, The Klein Institute for Aptitude Testing, New York, told of numerous tests made for lithographers in determining aptitudes of possible employees and also of employees slated for promotions. He said that a total of 75,000 tests have been made by his firm for 700 companies in ten years, and cited cases of men in executive positions failing to get required results in production departments because of worries connected with their domestic life or outside business connections. He told of a let down in production in one lithographic plant which affected the entire organization. Upon investigation, Mr. Klein learned that the foreman's wife had undergone an operation which had upset the foreman and his disturbed condition lowered quality and quantity of production in the pressroom. He opined that the employer should have been advised about the condition so that some means might have been provided for the foreman to have been relieved of his worries.

Color Tests

Concerning aptitude tests in mechanical departments, Mr. Klein said that even with all possible controls and chemistry being applied to operations,

(Continued on Page 80)

Left to right: Charles Mallett, President, National Association of Photo-Lithographers, and Victor Hurst, Manager, Graphic Arts Sales Div., Eastman Kodak Co., listen while Walter Soderstrom, Executive Vice President of NAPA makes a point during a visit to the Kodak Booth at the National Association of Photo-Lithographers' Convention held September 15-18, at Cincinnati.

John Morse, William Winship, jr., and John Carnie, of the Brett Litho Co. of Long Island City, N. Y., talk shop with Richard Gardner (second from right) of the Eastman Kodak Co. at the National Association of Photo - Lithographers' Convention held September 15-18 at Cincinnati.

1948-49 OFFICERS

Names of officers and directors elected at convention of NATIONAL ASSOCIATION OF PHOTO-LITHOGRAPHERS, Cincinnati:

President—Charles E. Mallet
Rand Avery-Gordon Taylor, Inc., Boston, Mass.

Executive Vice-President—Walter E. Soderstrom,
317 W. 45th St., New York 19, N. Y.

Treasurer—Penn R. Watson
Wm. J. Keller, Inc., Buffalo, N. Y.

Executive Secretary—William J. Stevens
317 W. 45th St., New York 19, N. Y.

Cost Accountant—E. Ames Hilperts, C. P. A.
317 W. 45th St., New York 19, N. Y.

BOARD OF DIRECTORS (One Year)

E. P. Doolin
Rust Craft Publishers, Inc.
Boston, Mass.

Rex G. Howard
Howard Co.
Peoria, Ill.

George G. Fetter, Jr.
Fetter Printing Co.
Louisville, Ky.

E. D. Kistler
The W. H. Kistler Stationery Co.
Denver, Col.

Victor Friedman
Crafton Graphic Co.
New York, N. Y.

Frank Myers
Copifyer Lithograph Co.
Cleveland, Ohio

J. W. Hoover
Jos. Hoover & Sons Co., Inc.
Philadelphia, Pa.

David Safran
Safran Printing Co.
Detroit, Mich.

Walter Horn
Horn & Norris, Inc.
Cleveland, Ohio

Arthur Wetzel
Wetzel Bros. Printing Co.
Milwaukee, Wis.

BOARD OF DIRECTORS (Two Years)

Don H. Black
Western Printing & Lithograph Co.
Racine, Wis.

Ernest E. Jones
Graphic Arts Corp. of Ohio
Toledo, Ohio

Robert B. Calvert
Reserve Lithograph & Printing Co., Inc.
Cleveland, Ohio

Leonard H. Knopf
Meyercord Co.
Chicago, Ill.

Charles E. Mallet
Rand Avery-Gordon Taylor, Inc.
Boston, Mass.

A. J. Fay
National Process Co.
New York, N. Y.

William J. Volz
Sackett & Wilhelms Litho. Corp.
Long Island City, N. Y.

Richard H. Grant, Jr.
Reynolds & Reynolds Co.
Dayton, Ohio

Penn R. Watson
Wm. J. Keller, Inc.
Buffalo, N. Y.

W. E. Grant
Kirby Lithograph Co., Inc.
Washington, D. C.

BOARD OF DIRECTORS (Three Years)

Raymond Blattenberger
Edward Stern & Co., Inc.
Philadelphia, Pa.

Sam Weil
Keller Crescent Co.
Evansville, Ind.

Herbert Johnson
Dosie & Johnson Co.
Milwaukee, Wis.

J. A. Westlin
The Maqua Co.
Schenectady, N. Y.

J. Tom Morgan
Commercial Printers, Inc.
Columbus, Ga.

Eugene E. Wirth
Rochester Lithographing Co.
Rochester, N. Y.

Eric O'Connor
Benallack Press
Montreal, Canada

Bernard S. Rosenstadt
Ardlee Service, Inc.
New York, N. Y.

A. H. Spaulding
Spaulding-Moss Co.
Boston, Mass.

C. V. Stucko
Rapid Copy Service
Chicago, Ill.

DIRECTORS EX-OFFICIO

Harry E. Brinkman
Cincinnati Lithographing Co.
Cincinnati, Ohio

A. G. McCormick, Jr.
The McCormick-Armstrong Co.
Witchita, Kans.

Paul A. Heideke
Washington Planograph Co.
Washington, D. C.

Merle S. Schaff
Dando-Schaff Printing & Pub. Co.
Philadelphia, Pa.

George E. Loder
National Process Co., Inc.
New York, N. Y.

This illustration shows the loading end of one of the seven Riekes special newspaper mailing conveyors in the mailing room of the Des Moines *Register* and *Tribune*. The loading end of the conveyor system is shown in the lower part of this illustration is opposite the press conveyor *1* (Fig. 1). Note inserters at work alongside the three conveyors.

Mailing Conveyor *provides smooth inserting, counting and bundling operations in plant of the Des Moines* Register *and* Tribune — *Work flows smoothly from press conveyor to delivery truck*

WITHIN fairly recent time, there has been an accelerated consciousness by newspaper production and mechanical executives for the necessity of mechanizing mailroom operations. Considerable attention has been given the subject by the ANPA Mechanical Conference, a number of speakers having appeared before this group in order to stimulate this interest. Among the speakers have been Joseph Menard, Mailroom Superintendent of the Des Moines *Register* and *Tribune*; Howard Jampol, President of the Jampol Co.; Julian Eberle, Mechanical Engineer of the Milwaukee *Journal*; Serge A. Birn and Earle H. Runion, Publication Engineers; more recently, Charles J. McGuire, Assistant Mechanical Superintendent of the Minneapolis *Star-Journal* and *Tribune*, and a number of other authorities.

Mailing room executives themselves, long have felt that they were supervisors of neglected mechanical departments, practically all of the work for which has been executed by the Biblical sweat of the brow through pure physical exertion.

One of the latest improvements in mailing room equipment is that currently being installed in the plant of the Des Moines (Ia.) *Register* and *Tribune*. A special type of three-way conveyor (total of seven complete units) is now in operation. This conveyor was developed by S. Riekes and Sons, Des Moines materials handling engineers, with the cooperation of Mailing Room Superintendent Joseph Menard.

As is shown in Fig. 1, each unit consists of three straight belt conveyors of standard construction with special drives; in addition, there are two S-shaped special curves attached to and deriving power from the two outside parallel straight conveyors. The units are of two

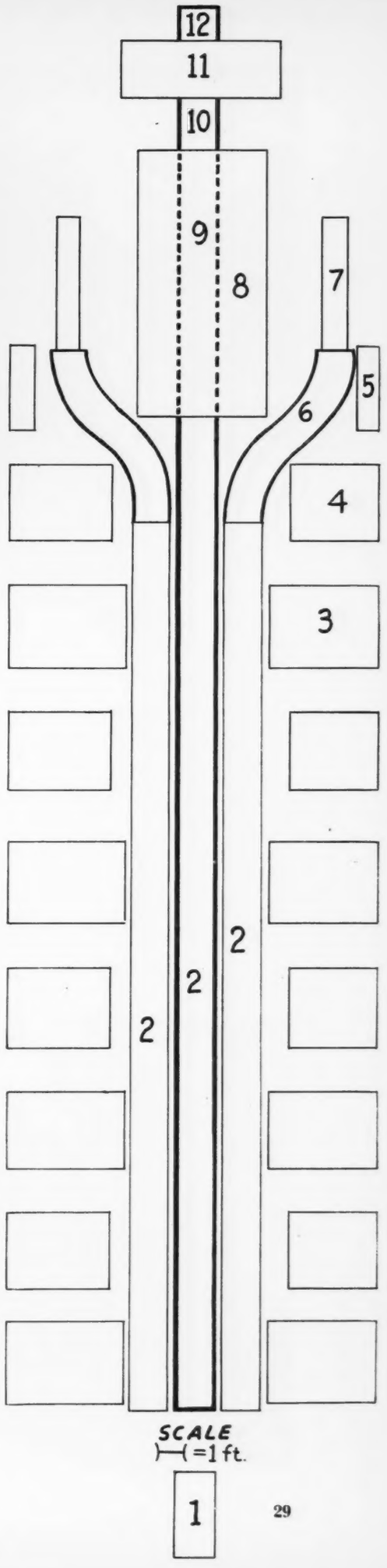


Diagram showing one of seven S. Riekes and Sons newspaper conveyor-inserting-bundling-wire tying units in plant of the Des Moines (Ia.) *Register* and *Tribune*. This equipment was devised with the cooperation of Mailing Room Superintendent Joseph Menard of the *Register* and *Tribune*.

1—Printing press conveyor delivers papers to the mailing room.
2—Powered belt conveyors
3—Inserting tables
4—Skid load of inserts
5—Insert table
6—Powered S curve conveyor
7—Gravity wheel conveyor
8—Belt conveyor
9—Roller conveyor
10—Insert table
11—Parker wire tying machine
12—Slide to chute

General view in section of mailing room of the Des Moines *Register* and *Tribune*. One of the S curve conveyor sections is shown in center, the center conveyor can be seen at right part of illustration. Note the canopy to hold previously addressed wrappers which are placed on bundles before conveyor moves bundles to tying machine.

lengths respectively 27 ft. long from the makeup table in the halftone illustration, while the longer ones as shown at *8* in diagrammatic Fig. 1 are approx. 37 ft. long.

The special S curves *6*, fig. 1, permit more inserting tables *3* and men to be placed along the two outside conveyors in considerably less floor space than if all straight conveyors were used. In addition, this feature permits placing the three feed ends of the belt conveyors (opposite *1* press conveyor) closer together so that the operators at the press conveyor do not have to carry the papers, but move them from the press conveyor to the belt conveyors without any necessity for walking.

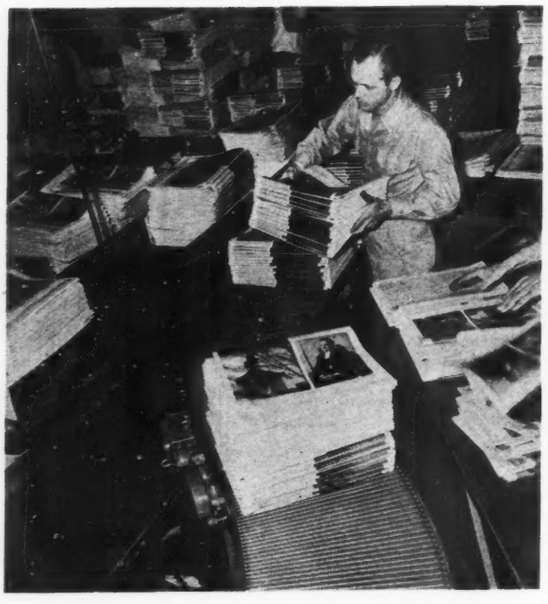
The makeup table *8* in Fig. 1 is essentially a belt conveyor with aprons on each side for the paper counters to use. The table is 60 in. wide by 108 in. long and is waist high. It is equipped with its own power unit and is fitted with a canopy or overhead shelf somewhat smaller than the working area of the makeup table. This canopy is used to hold the bundle wrappers.

The inserting tables *3* are of two sizes, 18 in. by 60 in., and 36 in. by 60 in. These are plain all-metal tables with the table top turned down to form a completely smooth working top.

Operation of the System

In operation, the mailer at press conveyor *1* places counted stacks on the center conveyor *2* which feeds directly through the makeup table *8* to the wire-tying machine *11*. The same operator at *1* also places stacks of papers on the outside two belt units. When no insertions are being made, the papers continue around the makeup table over the special S curves *6*, stopping automatically at the side of the makeup table *8* where the mailers count out the proper number of papers for the particular order. Here they cover the top and bottom of the stack with the previously addressed wrappers.

On Saturday nights when making up the Sunday paper, the Sunday supplements, having been previously assembled, are placed in skid loads near the inserting tables *3* along the two outside conveyors *2*. The Sunday news sections are transported down the two outside conveyors and the mailers doing the inserting remove the papers from the conveyor, insert the news section in the Sunday supplements and replace the stack on the conveyor to pass on to the mailers at the makeup table *8*.



Closeup of S curve portion of the Riekes conveyor used in mailing room of the Des Moines *Register* and *Tribune*. This S-shaped conveyor is driven by straight conveyor. Compare this illustration with diagrammatic Fig. 1. At right, a mailer is at work inserting a news section into previously "stuffed" Sunday paper.

Little Lifting To Be Done

Actually, there is little physical lifting of papers to be done as the press conveyors are slightly lower than the mailer units. When the press is operating at 25,000 copies per hour up to and including 24 pages, one operator is used. Two operators are used with over 24 pages or on high-speed presses running over 25,000 copies per hour.

Working Force Required

In the case of the Sunday paper, about 20 mailers are used along the belt conveyors for insertion work, each mailer placing his own papers back on the belt conveyors as insertion is completed. One operator on the Parker wire-tying machine, together with from four to six counters as needed depending upon the amount of hand counting to be done, completes each setup. This 25-27 man crew handles about 25,000 papers per hour through the tying machine when the paper consists of from 100 to 120 pages.

As will be understood from the description above under the subheading "Operation of the System" hand-trucking on dollies is eliminated on week-day papers and on the Sunday papers, only the Sunday supplements are handled on skid loads, the Sunday news section being handled the same as week-day papers from the press conveyor onto the belt conveyors.

Since all the papers are handled on the conveyors at waist height, there is no stooping or bending down by the mailer to pick up papers such as occurs when hand trucks are used. Consequently, there is no lost motion.

Mechanical Executives

are invited by the editor to write informally in a letter about mechanical devices or production helps which have been devised in their plants. Other executives will appreciate your generosity.

EQUIPMENT & SUPPLIES

Goss Double Page Stereo Plate Matcher

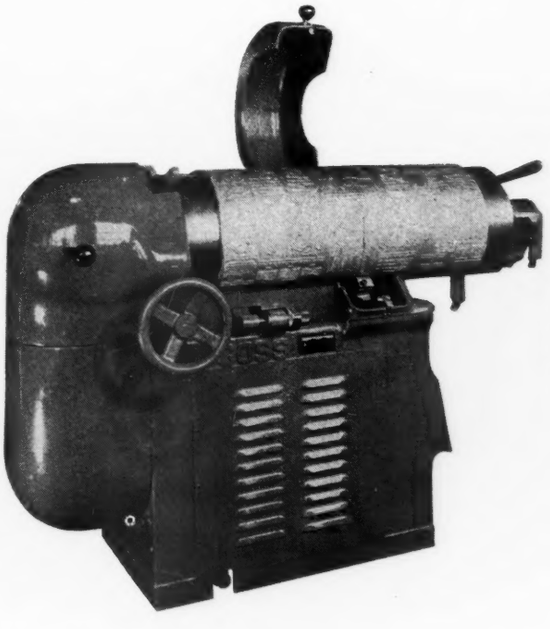
THE first of the new Goss 42-F Double-Page Stereotype Plate Matching Machines has been shipped to the Louisville (Ky.) *Courier-Journal* where it will be used in connection with the new Goss Multi-color Headliner press, it was recently announced by C. S. Reilly, Vice President of The Goss Printing Press Co.

This motor-driven machine is designed to give finer adjustments and to provide for more accurate matching of single page plates used in printing double page spreads. It can be adapted for use with either standard or tension type semi-cylindrical plates.

A pair of cutting knives, located about 180 deg. apart, are provided for tooling out the bevel beneath the matching edges of the two plates and for trimming them to an exact match. A micrometer adjustment insures accuracy in trimming these plates. The edge to be trimmed is fed into the cutters by means of a handwheel. Trimmed plates are also tested on this machine by actuating a lever which places the two plates together.

The cutters, powered by a 2 h.p. motor, are enclosed by a steel guard to protect the operator. The guard also directs the chips into a chute at the base of the machine, thus permitting easy disposal of chips.

The machine can be arranged for either a.c. or d.c. operation and is equipped with motor and controller push button stations. It weighs approximately 2000 lbs. and is 72½ in. long, 47 in. high, and 28 in. wide.



View of Goss 42-F Double Page Stereotype Plate Matching Machine for trimming the joining edges of plates so they will match properly on the press cylinder. In this view the chip guard has been raised and the two plates have been pushed together for inspection as to their matching qualities. Machine can be supplied either for standard or tension-type semi-cyl. plates.

Klix Speedy Spigot

THE Klix Speedy Spigot, a device for dispensing liquids from standard 5 gal. cans, has been announced by The Klix Company, Inc. The spigot provides a one-way passage for air into the can, allowing a full flow of liquids through the outlet without gurgling.

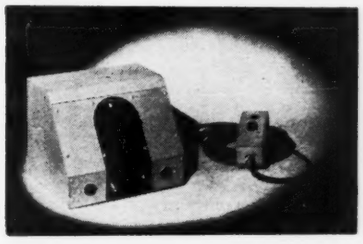
To operate the Speedy Spigot, pressure is applied to the thumb button which opens the valve. Air enters the inlet tube to open an automatic ball valve at its upper end. When the desired amount of liquid has been drawn, the pressure is released and a spring seats the plunger to halt the flow. Simultaneously, the ball valve drops into place, closing the air inlet and preventing the escape of liquid or vapors.

Klix Speedy Spigot permits liquids to flow in steady stream from 5 gal. cans. Air inlet and valve close automatically when plunger is released.

The Klix Speedy Spigot is made of copper, plated with cadmium for corrosion resistance. It is regularly furnished with two adapters to fit either of the two popular thread variations on cans with 1¾ in. openings. Other adapters are also available to suit varying requirements.

Improved Totalux

AN improved, compact precision instrument for controlling photographic exposures which require time intervals of 3 sec. to 60 min. has been announced by General Electric's Special Products Division. This automatic photoelectric integrating exposure meter, called a Totalux was developed by G-E's general engineering and consulting laboratory for application in any operation where photographic exposures must be held within close limits, such as photo-engraving and lithographic platemaking, photo-composing, and color separation.



Making use of the principle that the exposure of a photographic material is proportional to the product of light intensity and time exposed, the Totalux integrates these variables and automatically terminates an exposure after a pre-determined number of "counts" or foot candle seconds have been given the copy board or printing frame. It is designed to operate at any illumination level between 50 and 400 foot candles, and in this range has a linear precision within 1%.

The equipment consists of two major units, the exposure integrator and the totalizer, connected by 20 ft. of rubber-covered cable. It operates on a 45-w., 115 v., 50/60-cy. circuit. Weighs 17½ lbs. complete. The totalux is housed in a gray-green steel case with sloping front panel. The dial can be reset in total darkness, and exposure can be stopped at any time to make adjustments.

Additional information about the improved G-E totalux is given in Bulletin GEC-287, available through *Printing Equipment Engineer*.

Kodak Book Available

A NEW 38 page edition of *Kodak Films and Plates for Professional Use*, incorporating several new sections as well as up-to-date information on uses and applications of current Kodak films and plates is now available through photographic dealers for 35 cents, Eastman Kodak Co. has announced. Articles include the *Storage and Care of Films and Plates*, *How To Handle Kodak Sheet Film*, and *Filing and Storage of Negatives*. The descriptions of films and plates and their suggested uses in the various fields of photography have been brought up to date. Information on filter factors and development data has also been incorporated in the revised tables of the 6 in. by 8½ in. booklet.

Empco Proportioning Rule

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The Empco Proportioning Rule, according to manufacturer, is a precision-built instrument. It is made of acid-resistant, noncorrosive and hard-wearing materials. It is 20⅝ in. long by 1¼ in. wide.

The Rule contains four scales: 18 in. graduated in 1/16 in. divisions; 180 percent in ½ percent divisions; 108½ picas in ½ pica divisions; and 252 agate lines. The numerals of each scale are in a different color so as to make them easily distinguishable and assure rapid and positive reading at a glance. The mechanical portion of the rule consists of two sliding indicators—one red and one black, the salient feature being that the two indicators move in the same ratio to each other. The rule essentially is two instruments in one—an 18 in. linear scale and a comple automatic proportion calculator.

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Dico Rubber Plate and Stamp Press

THE Dico Rubber Plate and Stamp Press has been announced by O. C. Haney Co. Plates may be molded successfully up to max. form size of 8½ in. by 11 in. Platen pressure range is from a min. of 1 lb. to max. of 12 T. through screw-type pressure mechanism.

Upper and lower platens are electrically heated and thermostatically controlled to insure proper heating. Heat range is from 150 deg. to 550 deg.

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The floor area required for the press is 18 in. by 18 in. Height is 4 ft. Weight of press set up for operation is 350 lbs.

A chase and four sets of bearers as well as an instruction booklet accompanying each press.

Manufacturer states that special attention has been given to the manual control of the platen so that required pressure may be obtained without too much effort.

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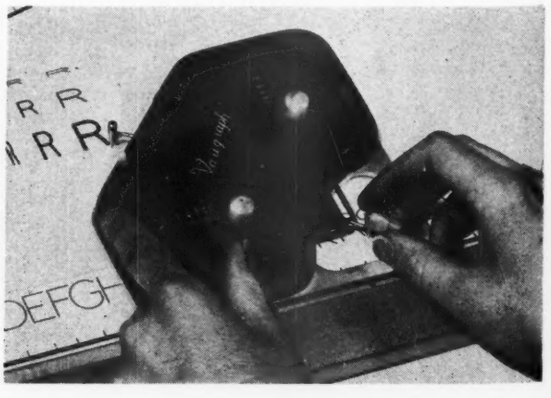

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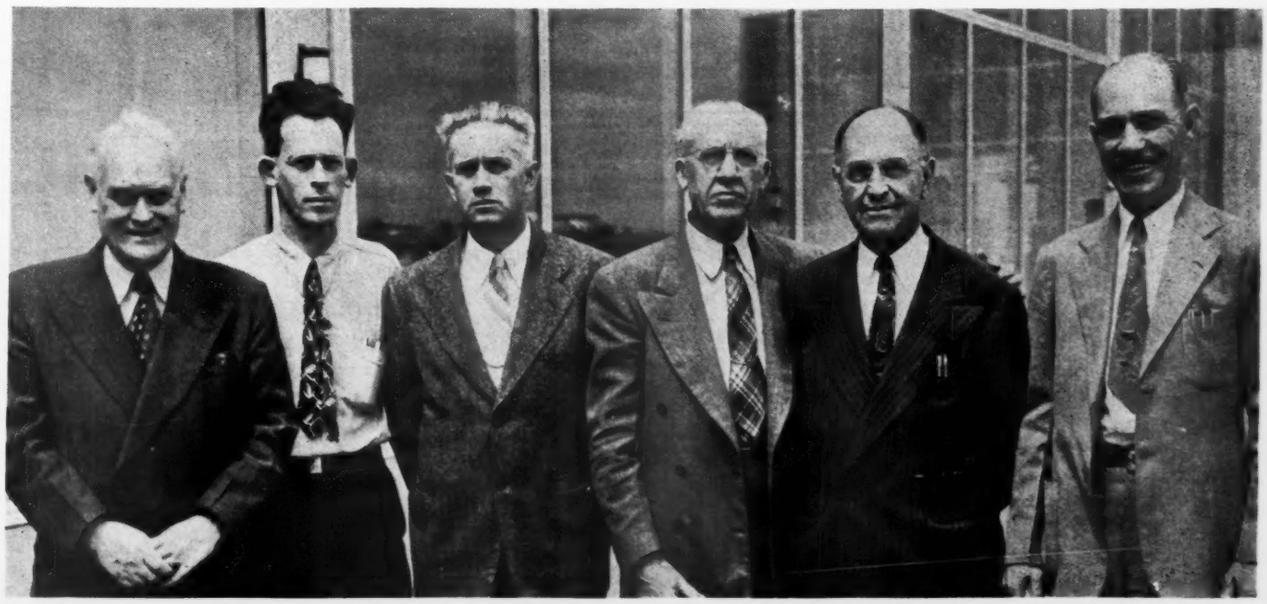
Most of the Portland (Ore.) Journal's Mechanical Executive Personnel—(From left to right): Harry Hale, Production Manager; Harold Hines, Asst. Press Foreman; Frank Dewey, Stereotype Foreman; Bill Moir, Maintenance Supt.; C. F. Harbaugh, Composing Room Supt.; Robert Henderson, Mailroom Supt.; L. L. (Curley) Launer, Press Foreman, was hospitalized at the time this picture was taken.



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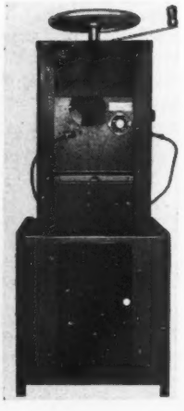

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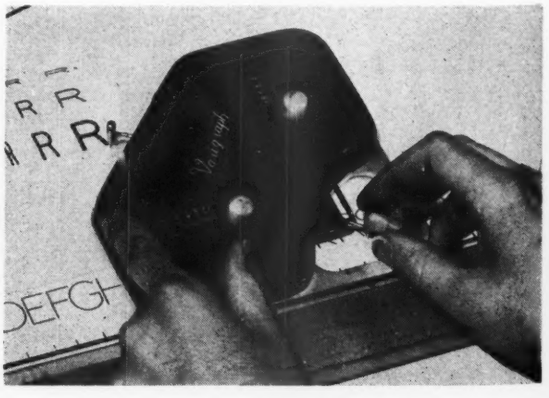

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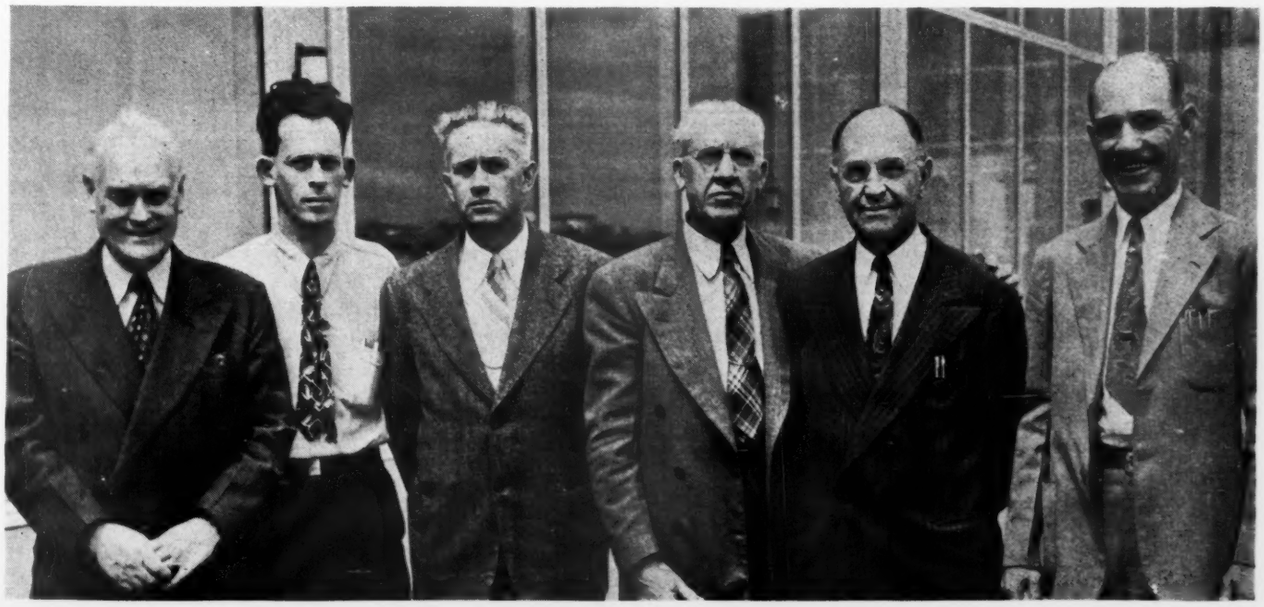


tive offices, library, telephone exchange room, bookkeeping and auditing departments.

Functional In Design

Contemporary in styling and functional in design, the building was designed specifically and particularly for a streamlined newspaper operation with each department dovetailed into the other.

The building is one of Portland's largest and was erected at a cost of approx. $4 million including all its newspaper and radio equipment.

The structure is of fireproof, steel-reinforced concrete with 72 in. deep steel girders, spanning 50 ft. over the pressroom. It was designed by Pietro Belluschi, Portland architect in collaboration with William Ginsberg, newspaper plant engineer, and was erected by L. H. Hoffman, Portland general contractor.

The building exterior is finished with agate granite from Minnesota on the lower floors and with limestone from Bedford, Ind., on the upper levels.

Acoustical soundproofing material was used on the ceilings throughout the building. Plaster finish was used in the offices. Painted concrete is used in the manufacturing portion of the building. Counters and woodwork throughout are birch. All exterior window frames are of aluminum.

Many interior partitions are of lightweight fire and vermin-proof Pyrobar tile blocks. Others are of pumice block. The supporting interior walls are of heavy reinforced masonry.

Thermopane glass is used in all exterior window surfaces. This double-pane glass both insulates (because of the two panes and a dried air space between) and filters out heat (because of the heat-absorbing qualities of the outer pane).

Color Scheme

The color scheme carried out is not limited to the offices. Building columns in the mechanical departments, in contrast to the light walls and ceilings, are painted bright vermillion. The steel gray press has been painted a royal blue.

The color scheme of the new building was planned for both functional and decorative purposes by Julian E. Garnsey of Princeton, N. J. Mr. Garnsey explained: "The light sand of the exterior increases the apparent size of the building and to set it apart from the dull gray buildings on the waterfront. The only other exterior colors and the dark green window sashes and a lighter green on the tiers between the windows of the upper floors.

"The walls of the cafeteria coffee shop are a warm peach which is intended to increase the appetite. The ceiling, as other ceilings in the working areas of the plant, is white with a little touch of lemon yellow in it.

"So far as we know, the treatment of the 16 unit Hoe newspaper printing press is rich, dark blue is unique. The normal colors supplied by the manufacturers is battleship gray which is a depressing color under any name. There is no particular reason why pressmen should be depressed by an unpleasant color. The blue used is cheerful, comfortable to the eyes and a good contrast for the white newsprint. The persimmon color columns which prevail throughout the plant and the rich, noble blue of the press are used also for decorative effect."

Wood Block Floor

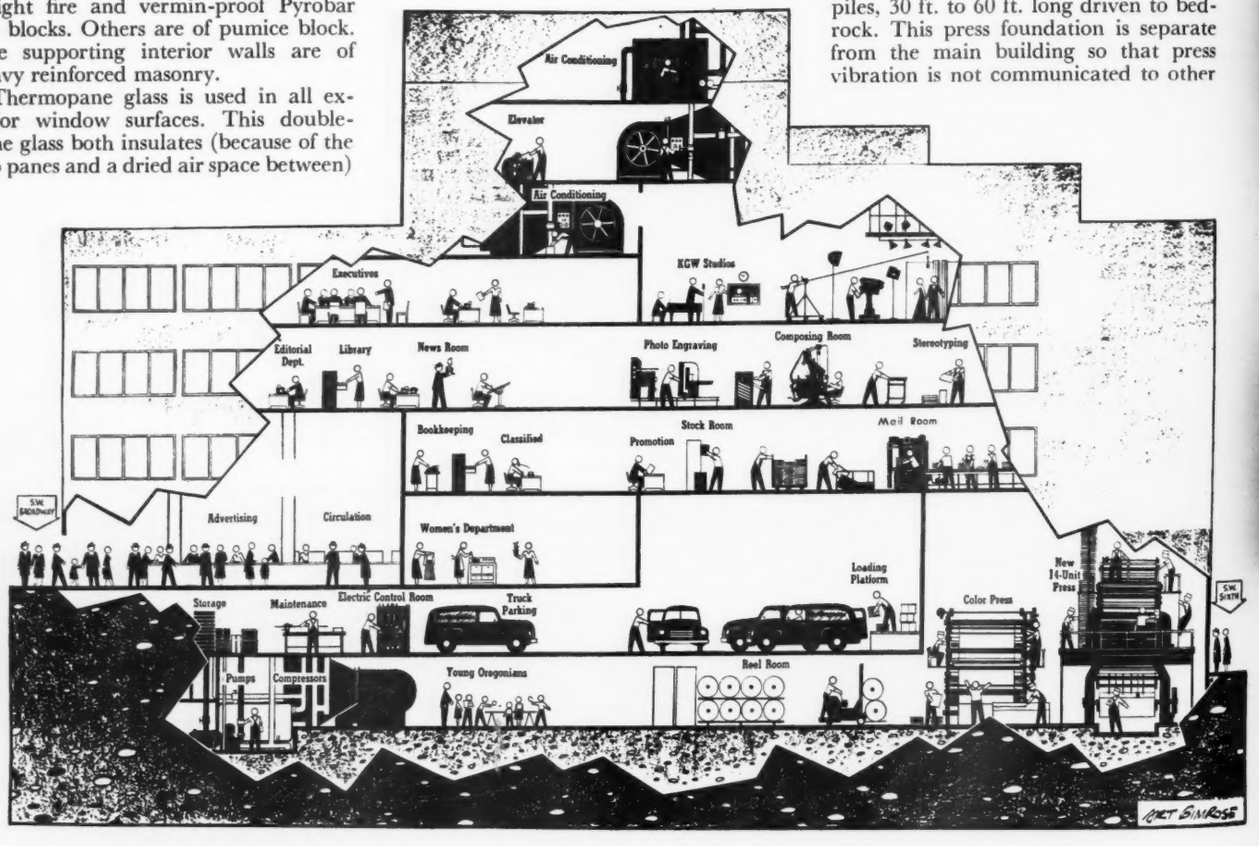
Worthwood wood block flooring has been laid in the mechanical departments: Photo-engraving, composing, stereotype, mailing room, and in the advertising, circulation and promotion departments. It consists of end grain fir blocks, 2½ in. thick. According to *Journal* executives, its principal value is that it is easy to work upon. It provides a resilient floor, especially for those standing a good deal of the time.

Lighting

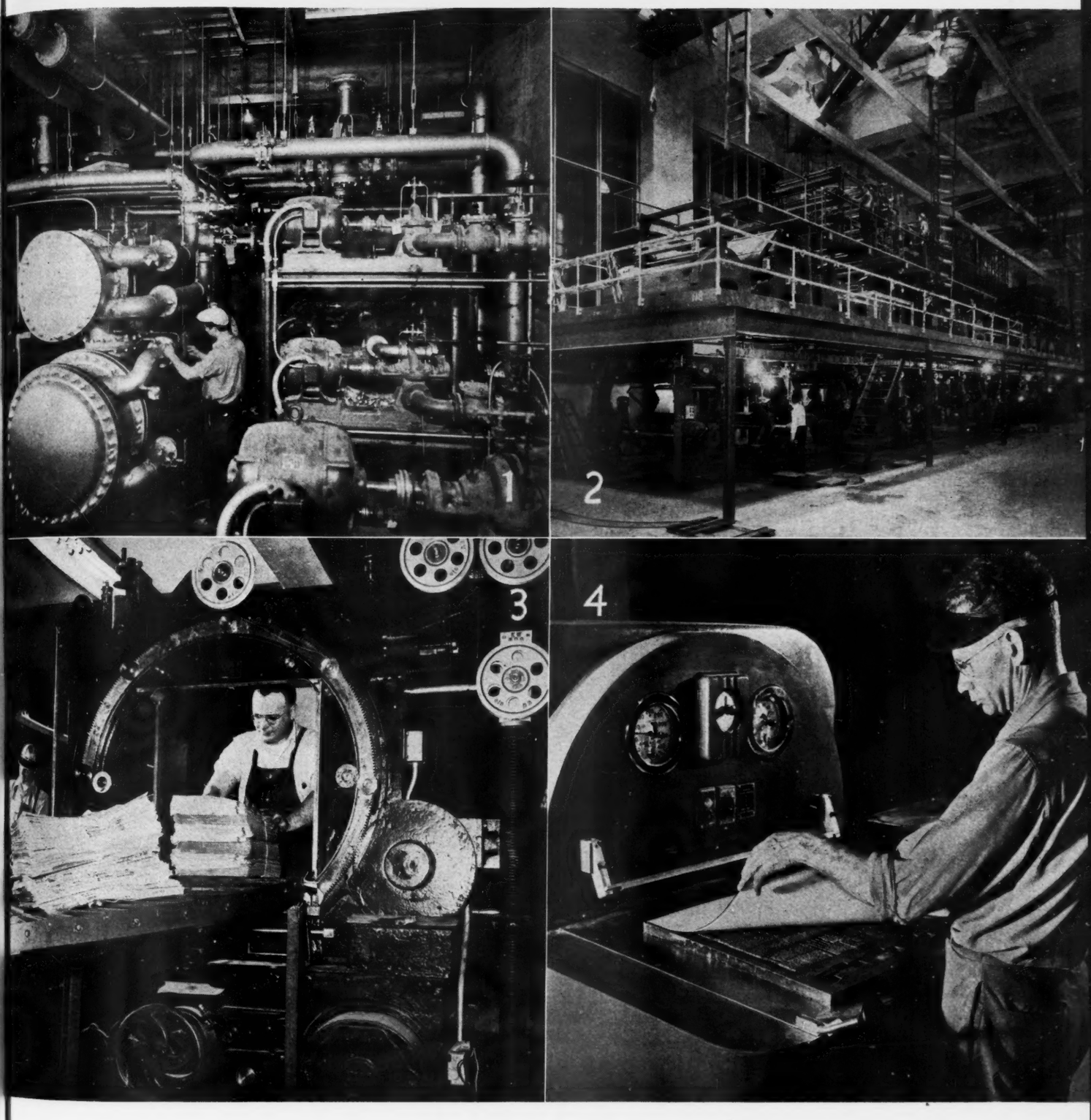
Lighting in the *Journal* plant is fluorescent. There are 6629 fluorescent tubes each 4 ft. long for lighting the offices and mechanical departments. Thus over 26,500 feet of tubing furnishes artificial light in the plant.

The Hoe Press

The *Journal's* new Hoe press can produce 135,000 forty-page newspapers per hour. Its 700 T. weight rests on a concrete slab, 12 ft. wide, 150 ft. long and 18 in. thick. The slab is supported by 36 ten-inch Raymond steel and concrete piles, 30 ft. to 60 ft. long driven to bedrock. This press foundation is separate from the main building so that press vibration is not communicated to other



Interesting Side Elevation Drawing of New Home of the Portland (Ore.) *Journal*. In the halftone illustration of the building accompanying this article, the building appears to be four stories high with an additional partial story on top. In reality, with the sub-basement, it consists of nine stories. Note the air conditioning equipment on top floors. Note also the ample trucking area. While the space is not shown in this diagram, space has been provided for a duplicate of the Hoe press in the future. The color press was moved from the old to the new building. Modern feature of the *Journal* building is the roof helicopter base, said to be first of its kind in the United States. Its hangar is 60 ft. by 20 ft. by 14 ft. high. The hangar houses a complete shop for service and maintenance and there is room for three helicopters.



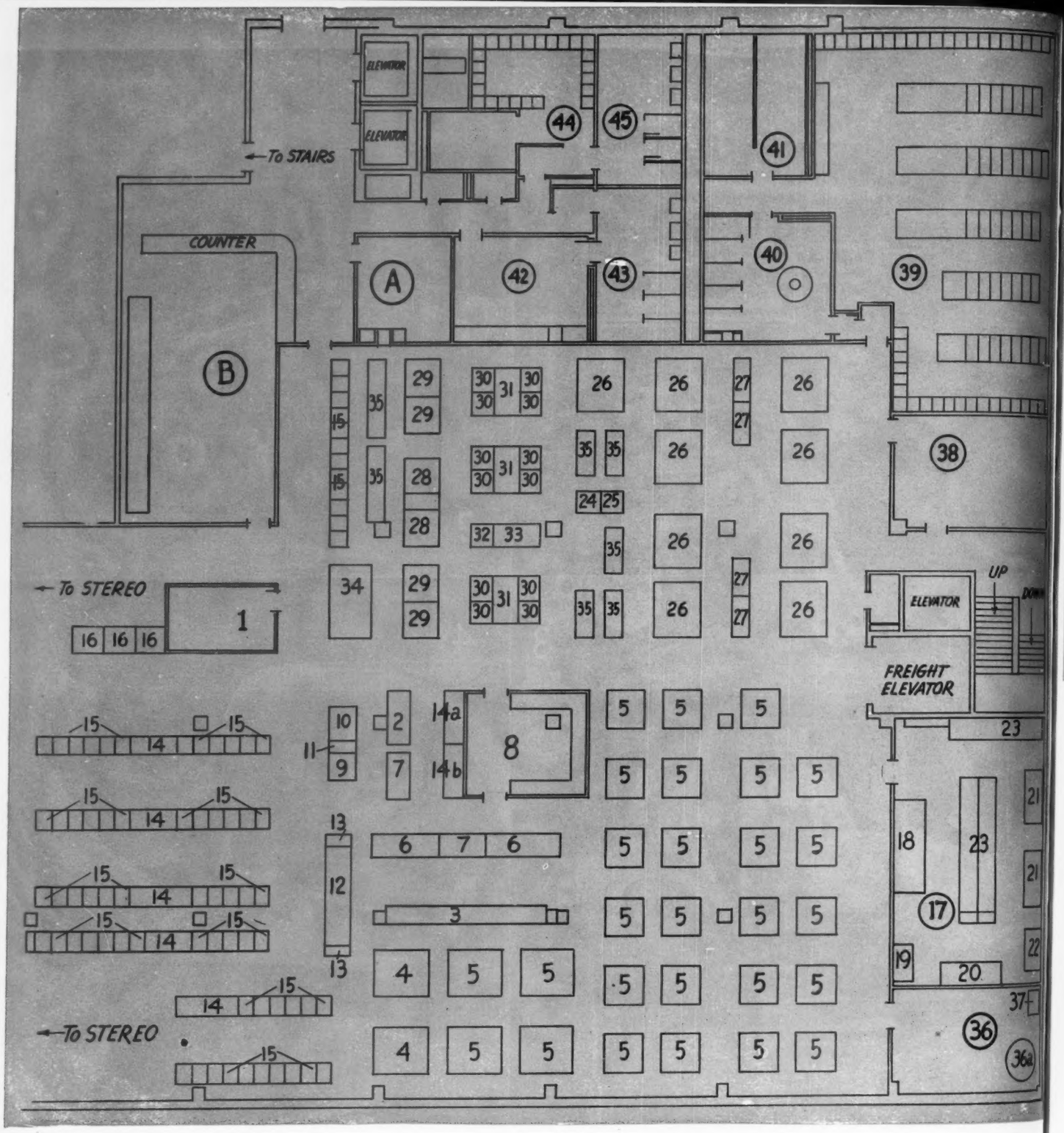
Views in New Plant of the Portland (Ore.) *Journal* showing some of the new equipment.

1. There's a lot of piping shown in this picture. Its part of the complicated reverse refrigeration heating plant. Said to be the lartest heat pump in the country. At left is compressor and at right are the water pumps. Entire building, including the mechanical departments is air conditioned.

2. This press cost $1 million. Maximum production capacity is 135,000 papers per hr. The press is three presses in one. One section of eight units can be operated to produce a 64 page paper; or two sections of eight units can be operated to produce two 64 page papers, or the entire group can be operated as three presses with each section producing papers of varying sizes for a total of 128 pages. Each of the three sections can produce a maximum of 45,000 papers an hour, or a grand total of 135,000. Press can be lined up to print, cut and fold papers with 1, 2, 3, 4, 6 and 8 sections. Balloon former permits production of 3, 6 or 8 sections.

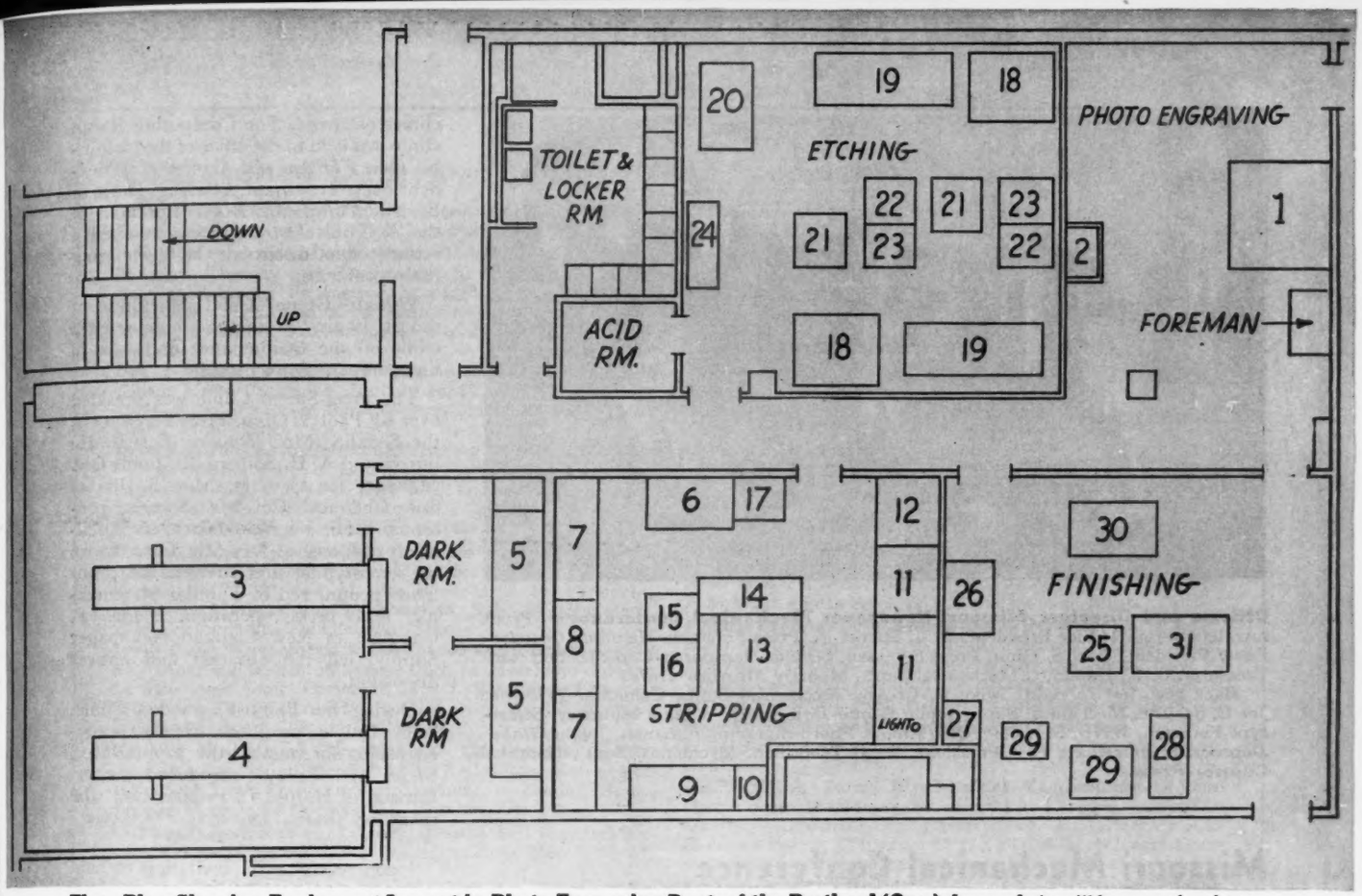
3. Signode-Parker Automatic Wire Tying Machine enables operator to bundle papers quickly as they come off the press. They are then shoved onto the conveyor where they slide down to the loading platform.

4. Hoe direct pressure stereotype mat molding press.



Equipment layout in Composing Room of the Portland (Ore.) *Journal.*

A—Journal Production Manager
B—Dispatch or Control Room
1—Composing Room Supt.
2—General Foreman
3—Pneumatic Tubes and News Copy Table
4—Head Machines
5—News Machines
6—News Dump
7—News Proof Presses
8—Proof Room
9—Ludlow Machine
10—Ludlow Matrix Cabinet
11—Ludlow Face Buffer
12—Correction Bank
13—Saws
14—Makeup Tables
15—Makeup Trucks
16—Page Form Files
17—Machinist's Room
18—Work Bench
19—Lathe
20—Parts Storage
21—Elrod Casters
22—Monotype Caster
23—Strip Storage
24—Ad Room Foreman
25—Ad Markup Desk
26—Ad Machines
27—Magazine Racks
28—Ludlow Casting Machines
29—Ludlow Matrix Casters
30—Ad Assembling Tops
31—Saw-Trimmers
32—Mitering Machine
33—Ad Proof Press
34—Page Proof Press
35—Ad Storage Cabinets
36—Metal Remelting Pot
37—Dross Burner
38—Showup Room
39—Locker and Dressing Room
40—Men's Toilet Room
41—Men's Shower Room
42—Men's Coat Room
43—Men's Toilet Room
44—Ladies' Locker and Cot Room
45—Women's Toilet Room



Floor Plan Showing Equipment Layout in Photo-Engraving Dept. of the Portland (Ore.) *Journal*. As will be seen, the photo-engraving department is supplied with three darkrooms; each contains a thermostatically controlled sink. The etching room in the photo-engraving department consists of acid-resistant hot mastic floor; four drains make cleaning-up operations easy. The sinks are fabricated from stainless steel and duro-iron. There is a steam-heated lye tank. Motor-driven exhaust draw out and dispose of fumes. Among the new equipment items are a Robertson camera, a Master etching machine, an oscillating Chemco burning-in stove with 14 burners, two powder boxes with powered exhausts, and a fluorescent lighted easel for stripping negatives.

In the Photo-Engraving Foreman's Office

1—Storage Cabinet
2—Sink

In the Camera Room

3—Darkroom Camera
4—Future Camera
5—Sink and Future Sink

In the Stripping Dept.

6—Copy Table
7—Stripping Sinks
8—Negative Sink
9—Plate Cleaning Sink
10—Soaking Sink
11—Frame
12—Metal
13—Plate Whirler
14—Table
15—Stove
16—Dry Box
17—Guillotine

In the Etching Dept.

18—Etching Machines
19—Tanks
20—Dunking Tank
21—Powder Boxes
22—Plate Coolers
23—Stoves
24—Plates

In the Finishing Dept.

25—Cutter
26—Plate Beveler
27—Planer
28—Router
29—Saws
30—Proof Press
31—Copy Table

parts of the building. The 16 units in the press and their folders extend 158 ft. and rise 26 ft. high. All of 19 freight cars were required to ship the press from New York.

To operate the press and its accessories, 102 motors are required. There are four drive motors—two 200 h.p. and two 125 h.p. Control of the press is by 746 push buttons. Throughout its system there are 2010 electrical contacts and 35 miles of wiring. It is possible to do four-color printing on many pages and two-color printing on virtually any page.

The 35 dynamic brakes on the press, aided by other brakes on each motor, stop the press in four revolutions of the cylinder, when the machine is traveling full speed. This is not the emergency stopping distance, but is the regular stop. If something serious should happen to the press while in motion, a shearing pin will break instantly at the point of trouble thus freeing the gears. A new shearing pin can be installed in a short time.

Features of the Building

Air Conditioning—Full air conditioning is employed, using the new reverse cycle refrigeration, or heat pump, augmented by radiant heating. It is claimed to be the largest such system in any building in the United States. It moves 225,000 cu. ft. of heated or cooled air per minute through the building. Installation of the air conditioning equipment was supervised by J. Donald Kroeker, Portland heating and ventilating engineer. The compressor and deep well pumps were supplied by the Worthington Pump & Machinery Corp.; the circulating pumps by Economy Pump Co.; fans by Sturtevant Corporation; coils by Trane Company, and the temperature controls by Minneapolis-Honeywell Co. Filters were supplied by American Filter Corp.

Lightens Building Weight—Dantore, a new plaster aggregate made from exploded volcanic glass mined in Oregon, is used. It materially lightens the building's structural weight and provides a high type of insulating acoustic plaster.

Isolation of Press—Complete isolation of 608 T. of high speed Hoe presses from the rest of the building is achieved by mounting the presses on a 74 T. concrete slab, which in turn lies on a 6 in. layer of dried sand, and in turn supported by steel and concrete piling extending down to bedrock distances from 30 to 60 ft.

New Type Radio Studio—New type studios for Radio Station KGW are, in effect, rooms within rooms. The studio rooms are suspended within the masonry core walls of the building, thus also gaining maximum isolation from the plant.

Television Studio—There is a television studio measuring 65 ft. by 77 ft. with 36 ft. ceiling. It will be put into operation as soon as television becomes available to the Northwest.

Huge Truckway—There is a huge truckway, two stories in height running entirely through the building from Jefferson to Columbia Sts. to provide off-street areas for loading dicks, paper roll delivery and bundle distribution.

Officers and Directors, Missouri Newspaper Mechanical Conference — (Front row, left to right): Vice President, E. L. Sparks jr., Press Foreman, Hannibal *Courier-Post;* President, Paul S. Ginn, Press Foreman, Sedalia *Democrat-Capital;* Secretary Treasurer, O. K. Hammitt, Mechanical Supt., Moberly *Monitor-Index.*

Back row, left to right: Mike C. Creasy, Mechanical Supt., Columbia *Tribune;* Joe C. Schulte, Mechanical Supt., Joplin *Globe-Democrat;* William Mahoney, Stereotype Foreman, WNU, St. Louis; Otto Enlow, Photo-engraving Foreman, Joplin *Globe-Democrat;* Immediate Past President, Beryl Troutman, Mechanical Supt., Hannibal *Courier-Press.*

Missouri Mechanical Conference

THE 1949 Missouri Newspaper Mechanical Conference was held on September 11 and 12 at Tiger Hotel, Columbia, Mo. There were approx. 110 executives in attendance. President Beryl Troutman, Mechanical Supt. of the Hannibal *Courier-Post*, introduced the first speaker, Alex Prim, Asst. Production Mgr., of the St. Louis *Post-Dispatch*, who discussed *Using Color in the Daily Comics and Other Features of the Newspaper*. Irvan Darnall, Mechanical Supt. of Springfield Newspapers, Inc., spoke on *Experiences During the Fire Which Destroyed Our Plant*.

A number of mechanical department clinics occurred. The Composing Room clinic was held in the office of the Columbia (Mo.) *Tribune* with Conference President Beryl Troutman presiding. Herman Burner, Composing Room Foreman of the St. Louis *Post-Dispatch* conducted a round table discussion on composing room problems.

William Green, Chief Machinist of the St. Louis *Post-Dispatch*, conducted a clinic on the maintenance and care of line-composing machines.

The Press-Stereo Clinic was presided over by Paul S. Ginn, Press Foreman of the Sedalia (Mo.) *Democrat-Capital*. He introduced A. H. Solberg, St. Louis Div. Manager for Geo. H. Morrill Div. of Sun Chemical Co. Mr. Solberg presented a talk on *News Inks*. Carl Borckhardt of Certified Dry Mat Corp. spoke on stereotyping and stressed the problems encountered in Tubular platemaking and press operation. Eddie P. Gaughan of New England Newspaper Supply, led the question and answer discussion.

During the Photo-Engravers' Clinic, Otto Enlow presided. He is photo-engraving foreman of the Joplin (Mo.) *Globe*. Mr. Enlow introduced Robert Carlson of Harold L. Pitman Co., who spoke on *General Engraving Practices and New Equipment*.

Upon receiving an invitation to hold its 1949 meeting in Joplin, from Hotel Conner and the Chamber of Commerce, the 1948 conference voted unanimously to accept the invitation. The date of the 1949 meeting will be determined at a later date by the board of directors.

Fort Wayne (Ind.) Club of Printing House Craftsmen Organized—Gradie Oakes, President of the Intl. Association of Printing House Craftsmen, presents charter to President Joseph Hayes, at dinner meeting, Saturday night, September 11, at Van Orman Hotel.

Left to right in the picture are: Club Treasurer, Clint Barnes, President of the Ft. Wayne Engraving Co.; Club Secretary, Herbert W. Schabacher, of William A Didier Co., Commercial Printers; Club President, Joseph Hayes, President of Hayes Printing Service; Second Vice President, William Taylor, Manager, Ft. Wayne's Millcraft Paper Co.; Intl. President Gradie Oakes, President of Process Color Plate Co., Chicago; Club First Vice President, O. B. Schwaab, President of Lincoln Engraving Co.

The Club started off with a membership of about 75. Al Freiderich, of the Advance Independent Electrotype Co., assisted substantially by officers and members of the Indianapolis Club, organized the Fort Wayne Club. At the charter meeting, every one of the 11 clubs in the Fifth District was represented by at least one local member. There were 140 at the meeting.

Annual Report Is Hand-Set

Usually, the fabrication of an annual industrial report is a rush operation. Of late years, these reports must be "dolled up" to look attractive. In other words, most industrial companies have been insisting that human interest pervade the pages of such reports, rather than to print a cold statistical report.

American Type Founders, Inc., this year not only got its report out promptly, but the type for the job was entirely hand-set—including the display and text.

The idea for hand-setting the report grew out of suggestions of stockholders and customers who thought a manufacturer of foundry type ought to show it off on every occasion. ATF's Bulmer foundry type face was chosen. The report itself was planned to achieve a bookish feeling.

William E. Rudge's Sons New York printing firm, created the design and produced the 26 page report for ATF. The report measures 8½ in. by 11 in.

Cumberland Gloss (80 lb.) with Printflex Cover (60 lb.) composed the paper stock for the job which was done in two and four colors. Mutual Bindery, New York, did the binding.

Conference Dates (*with organization names and principal officers*)

American Photo-Engravers Association — Frank J. Schreiber, Commissioner, 166 W. Van Buren St., Chicago 4, Ill.

ANPA Mechanical Conference—Palmer House, Chicago, Monday, Tuesday and Wednesday, June 6, 7 and 8, 1949. Edwin H. Evers, Production Manager, St. Louis *Globe-Democrat*, Chairman of the Committee. Walter E. Wines, Manager, ANPA Mechanical Dept., 370 Lexington Ave., New York 17, N. Y.

Great Lakes Newspaper Mechanical Conference—Gibson Hotel, Cincinnati, January 16, 17, 18, 1949. President C. M. Kirk, Stereotype Supt., Detroit *News*; Secretary Al P. Oberg, Flint (Mich.) *Journal*.

International Association of Printing House Craftsmen—1949 Convention to be held in San Francisco, Palace Hotel, September 4, 5, 6, 7, 1949. President, Gradie Oakes, Process Color Plate Co., 522 So. Clinton St., Chicago 7. Executive Secretary, Pearl E. Oldt, 18 E. Fourth St., Cincinnati 2, Ohio.

International Typographic Composition Association—1949 Convention to be held at Hotel Statler, Boston, Mass., September 22, 23 and 24. Frederick H. Lutz, President, Brockton, Mass.; Frank M. Sherman, Executive Secretary, 1015 Chestnut St., Philadelphia 7, Pa.

Iowa Daily Newspaper Mechanical Conference— 1949 conference will be held in Mason City, Ia. Hotel and dates to be announced later. President, Ken I. Waughtal, Kayenay Engraving Co., Mason City, Ia.; Secretary, Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald*.

Kansas Newspaper Mechanical Conference — 1949 meeting to be held at Hotel Conner, Joplin, Mo., dates to be announced later. President Vern Williams, Mechanical Supt., Topeka Newspaper Printing Co., Topeka, Kas.

Lithographers National Association— W. Floyd Maxwell, Executive Director, 420 Lexington Ave., New York 17, N. Y.

Missouri Newspaper Mechanical Conference — Hotel Conner, Joplin, Mo., in 1949, exact dates to be announced later. President, Paul S. Ginn, Press Foreman, Sedalia (Mo.) *Democrat-Capital;* Secretary-Treasurer, O. K. Hammitt, Mechanical Supt., Moberly (Mo.) *Monitor-Index*.

National Association of Litho Clubs — Washington, D. C., April 29-30, 1949. President, Albert Tucker, Sauls Lithograph Co., Washington, D. C.; Secretary William J. Stevens, 1776 Broadway, New York 19, N. Y.

National Association of Photo Lithographers — 1949 convention will be held at Hotel Pennsylvania, New York, N. Y., October 19, 20, 21 and 22. Executive Vice President, Walter E. Soderstrom. 317 West 45th St., New York 19, N. Y.; Executive Secretary, William J. Stevens, 317 West 45th St., New York 19, N. Y.

National Graphic Arts Education Association — John G. Henderson, President; Fred J. Hartman, Educational Director, 719 Fifteenth St., N. W., Washington 5, D. C.

National Graphic Arts Exposition—International Amphitheatre, Chicago, September 24 to October 7, 1950. National Graphic Arts Exposition, Inc., A. E. Giegengack, President. Fred W. Hoch, Secretary, 461 Eighth Ave., New York 1, N. Y. During the period, September 24 to October 7, 1950, a number of Graphic Arts associations will hold their annual conventions as follows: Intl. Assoc. of Printing House Craftsmen, Hotel Stevens, Sept. 10, 11, 12 and 13, 1950; Intl. Typographic Composition Assoc., Sheraton Hotel, Sept. 14, 15 and 16; Printing Industry of America, Palmer House, Sept. 17, 18, 19 and 20, 1950; and the National Assoc. of Photo-Lithographers.

National Printing Equipment Association, Inc. — Edgewater Beach Hotel, Chicago, Ill., October 20, 21 and 23, 1948. James E. Bennet, Secretary, 140 Nassau St., New York 7, N. Y.

New England Mechanical Conference — Hotel Statler, Boston, Oct. 23 and 24, 1948. President, Wm. H. Porter, Mech. Supt., New Haven (Conn.) *Register*. Secretary-Treasurer, Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day*.

Northwest Mechanical Conference — Hotel Radisson, Minneapolis, Minn., February 12, 13, 14, 1949. President, Chas. R. McGuire, Mechanical Supt., Minneapolis (Minn.) *Star* and *Tribune;* Secretary-Treasurer, Vernon G. Eck, 3725 Forth-eighth Ave., So., Minneapolis 6, Minn.

Pacific Mechanical Conference — Roosevelt Hotel, Hollywood, Calif., May 20, 21, 22, 1949. President, Harold Winn, Hollywood *Citizen-News;* Secretary for the North, Edw. N. Conley, color press foreman, San Francisco *Chronicle;* Secretary for the South, Fred J. Moyer, Los Angeles, *Daily News*.

Pacific Society of Printing House Craftsmen — Blair Lord, Secretary-Treasurer, 3650 Fairmount Blvd., Riverside, Calif.

PNPA-NJPA Joint Mechanical Conference — Penn Harris Hotel, Harrisburg, Pa., April 1 and 2, 1949. Edward O. Davies, Mechanical Supt., Harrisburg (Pa.) *Patriot and Evening News*, Chairman of the PNPA Mechanical Committee is in charge of the arrangements. Thus the states of Pennsylvania and New Jersey will be represented by one conference; executives from Delaware and Maryland (which states have no conference) are also invited to participate in the joint meeting in Harrisburg.

Printing Industry of America—Edgewater Beach Hotel, Wed. to Sat. inclusive, Oct. 20-23; James R. Brackett, General Manager, 719 Fifteenth St., N.W., Washington, D. C. 1949 PIA Convention — Hotel Biltmore, Los Angeles, Nov. 14-17, 1949.

SNPA (Eastern Div.) Mechanical Conference—Chairman, Luther Wright, Mechanical Supt., New Orleans (La.) *Item;* Secretary, Tom Tanner, c–o SNPA, P.O. Box 1569, Chattanooga 1, Tenn.; Chairman of Supply and Equipment Group, Owen W. Asbell, Ludlow Typograph Co., representative in Atlanta, Ga.

SNPA (Western Div.) Mechanical Conference—Mayo Hotel, Tulsa, Okla., February 21 and 22, 1949. W. J. Dowell, Head Machinist, Newspaper Printing Corp., Tulsa, is General Chairman. C. W. Tabb, SNPA Executive Committee, 723 Texas Bank Bldg., Dallas, Tex., is Secretary. Chairman of the Supply Men's Committee is Don Malcolm, Dallas Representative, Burgess Cellulos Co., Freeport, Ill.

Southwestern Graphic Arts Conference—E. J. Deubner, Executive Secretary, 130 No. Volutsia Ave., Wichita 8, Kan.

HARRIS-SEYBOLD ANNUAL REPORT

Harris-Seybold Co., manufacturer of offset lithographic equipment, has issued its annual report in the form of an attractive 24 page, 11 in. by 8½ in. booklet with charts, graphs, illustrations and reports of every phase of the organization. The cover is unique in itself as it combines in blue and white a roll of paper being cut into individual sheets by a cutter blade and then passing between the blanket and impression cylinder to symbolize an offset press. This is portrayed against a simulated maroon fabric background. The inside covers are devoted to pictures of a four-color rotary offset press and a paper mill trimmer.

Harris-Seybold reports net income, which includes that of wholly owned Canadian subsidiary, was equivalent, after dividend payments on the Preference Stock, to approximately $15.66 per share of common stock outstanding. During the fiscal year, regular quarterly dividends were paid on the outstanding preference stock and a total of $1.30 per share on the common stock. During the previous fiscal year, dividend payments on the common stock aggregated $1 per share. The report states that demand for the company's products continues heavy.

EXECUTIVE ¶s

N. H. Neilson has been appointed Sales Manager, Dayco Roller Div., the Dayton Rubber Co., according to announcement of L. C. Strobeck, vice president in charge of Mechanical Sales Division, succeeding the late Harry J. Hunt. Mr. Neilson has been acting in the

New Sales Manager for Dayton Rubber's Dayco Roller Div. is N. H. Neilson.

capacity of Sales Manager for the past year. Prior to that he was Western Division Sales Representative with headquarters in Chicago. Mr. Neilson now makes his headquarters at the plant in Dayton, O.

Stuart E. Arnett, Sales Manager of the Printing Machinery Division of the Electric Boat Co., announces the transfer of Charles A. Harwood, from Pacific District Manager to Midwest Manager in charge of the Chicago office. He is a member of various printing organizations and a graduate of Ohio State University and Ohio Northern Law School. Mr. Harwood replaces Jack Hagen who resigned to accept another position.

Dr. Andries Voet, Director of Research for the printing ink division of the J. M. Huber Corp., New York, flew to Europe on September 17 to deliver two addresses before the International Rheological Society, in Holland. Dr. Voet spoke before the scientific section of the international group on "Viscosity and Dielectric Constant of Dispersions and Solutions" and the industrial section on *The Rheology of Typographic Printing Inks.* Rheology is the "science of flow"—a branch of physics which studies the behaviour of materials under conditions of flow. At the convention Dr. Voet was official representative of the American Society of Rheology and at the same time served as reporter for the American Chemical Society. After the convention he toured Holland, western Germany, France, Belgium, and Britain, where he had been invited to speak before university groups and Graphic Arts societies. Dr. Voet is recognized throughout the scientific world for his rheological studies relating to dielectric constants. In January of this year he was elected to fellowship in the New York Academy of Sciences for the work which was summarized in his book *Dielectrics and Rheology of Non-Aqueous Suspensions.* In 1946 he was selected by the Department of Commerce to make a survey of printing ink developments that took place in Germany during the war years.

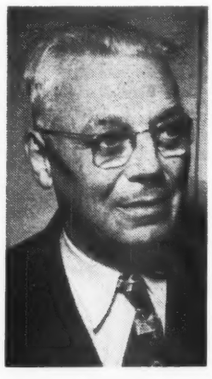
Carnegie Institute of Technology announces the addition of George J. Mills to the Carnegie staff as an instructor in printing. A recent graduate in printing at Carnegie and a native of Fort Smith, Ark., Mills received a bachelor of science degree in education from Kansas State Teachers College, Pittsburg, Kas., in 1941. From 1941 to 1945 he served as printing instructor in the Fort Smith senior high school. Mills joins Carnegie after a year as assistant manager of the Kistler Stationery Co., Denver, Colo.

Harry W. Brintnall, pioneer figure in the Western printing equipment industry, died in Alameda, Calif., on September 2. Known as the founder of the Harry W. Brintnall Co. in 1906, Mr. Brintnall retired four years ago at the age of 70. He was widely recognized in Masonic circles, and was a member of the Olympic Club of San Francisco. He is survived by his widow, Mrs. May Brintnall, and a daughter, Mrs. John M. Ansel of Alameda.

Sun Chemical Corp. has announced appointment of Dr. Wilber Otis Teeters as Director of Research to succeed Dr. Paul V. McKinney, resigned. In February, 1946, Dr. Teeters joined Sun Chemical as principal research chemist. The following January he was assigned the additional responsibility for supervision of Sun's research laboratory in Harrison, N. J. He graduated from the University of Iowa in 1930 and continued his studies at the University of Illinois, where he was a National Textile Research Fellow, receiving his master's degree in 1933 and his doctorate in 1935. Prior to joining Sun Chemical Corporation, Dr. Teeters had been research chemist with Rohm & Haas and with the Ammonia Department of DuPont and supervisor of chemical research with the Barrett Division of Allied Chemical & Dye Corporation.

Monsen-Chicago has announced appointment of Joseph Hoffman as sales manager effective immediately. Mr. Hoffman joined the Monsen organization eight years ago. Mr. Hoffman, it is announced, contemplates no radical changes in sales policy.

Ira E. Stuck, instrumental in the growth of the Pacific Newspaper Mechanical Conference, has joined the Harry W. Brintnall Co. as consultant for West Coast daily newspapers, according to John E. Jones, Executive Vice President. Mr. Stuck supervised installation of the San Francisco *Shopping News* plant in 1925 and remained as composing room foreman until his recent retirement. Mr. Stuck was elected president of the Pacific Newspaper Mechanical Conference in 1944-45, and served as chairman of the Conference Committee in 1948. His headquarters will alternate between the San Francisco, Los Angeles, and Seattle Offices of the Harry W. Brintnall Co.



Ira E. Stuck has been named consultant for West Coast daily papers by Harry W. Brintnall Co.

Suggestion for Craftsman's Creed

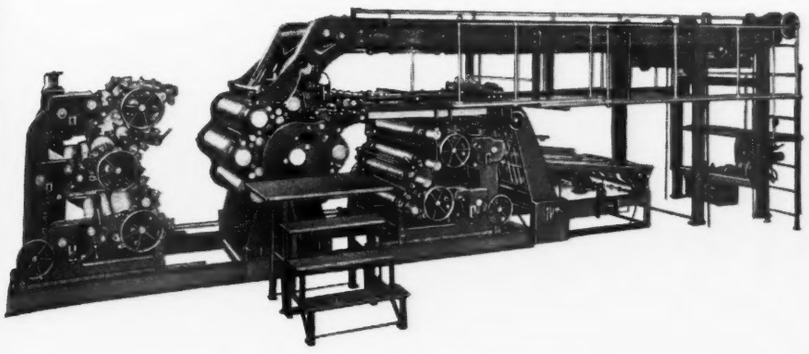
By M. L. ABRAMS

WE MUST realize our sense of duty to our industry which for all of those engaged in it is "the art preservative of all arts". Without The Graphic Arts there can be no progress. Our whole social structure is maintained because of it. It reaches into every phase of life. Society is maintained to a great extent because of it, and is dependent upon it. Countries that we consider illiterate are clamoring for a means of expression through the medium of printing.

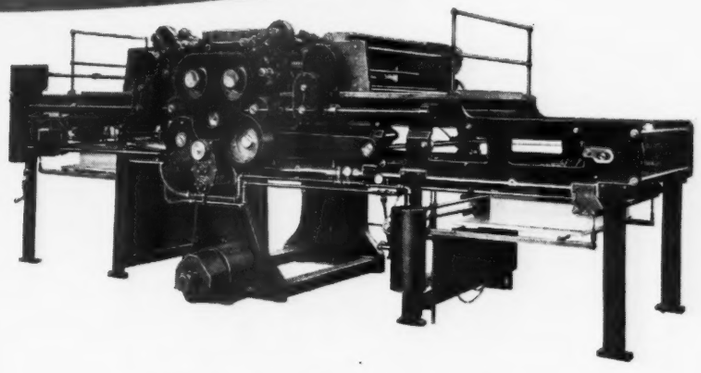
Our sense of responsibility should not be weakened by the madness created by the war and its aftermath. We should, instead, have the energy to do the things we like to do. To any true Craftsman these are the things that will advance the industry.

This brings us to our imperative duty which is also the concern of the industry as a whole, and each individual in it—that of sharing knowledge. When you share your knowledge, you give. Sharing knowledge also has its compensations because its counterpart is receiving. Thus, if you give, you will also receive and help to make this a better world in which to live.

for COLOR PRINTING at its best



COTTRELL FIVE COLOR ROTARY
The 36" x 48" five-color Cottrell rotary prints at speeds up to 5500 sheets per hour — the 48" x 71" prints at speeds up to 4500 sheets per hour.



COTTRELL TWO COLOR ROTARY
The two color Cottrell rotary prints at speeds of 4500 and 5500 sheets per hour depending on the size press used.

The Cottrell reputation for quality and volume in color printing is earned by the performance records of its presses wherever used.

The two presses illustrated are stars in this well-known family of fine presses. They offer printers and publishers a sensible investment in the future of color printing.

Cottrell

C. B. COTTRELL & SONS CO.
Westerly, Rhode Island
New York: 25 E. 26th St. • Claybourn Division: 3713 N. Humboldt Ave., Millwaukee, Wis.
Chicago: Daily News Bldg., 400W. Madison St. • Smyth-Horne, Ltd., 13 Bedford Row, London W.C.1, Eng.

6th Educational Graphic Arts Exposition

THE National Graphic Arts Expositions, Inc., has completed arrangements for the Sixth Educational Graphic Arts Exposition to be held at the International Amphitheatre, Chicago, Ill., September 11 to September 23, 1950.

Contracts have been signed for the lease of the International Amphitheatre for this Sixth Graphic Arts Exposition, which no doubt, from present plans, will be the largest Graphic Arts Exhibit held to date.

Facilities of the International Amphitheatre provide excellent accommodations for heavy machinery as there is no limitations on weight on the main floor of the Amphitheatre. Provisions also are made for delivery of equipment direct from truck to the assigned floor space on the first floor. Liberal arrangements have been made for the installation and removal of exhibits.

There is little doubt that the attendance of the Fifth Educational Graphic Arts Exposition of 116,884 will be exceeded in this centrally located exhibit of operating Graphic Arts equipment when the doors are thrown open to the industry.

Chicago Hotels are prepared to arrange for hotel and convention accommodations for the period of September 11 through 23, 1950. Some associations have signed up such reservations. The Printing Industry of America will hold its convention at the Palmer House, September 17, 18, 19 and 20, 1950. The International Association of Printing House craftsmen will hold its convention at the Hotel Stevens, September 10, 11, 12 and 13, 1950. The International Typographic Composition Association will hold its convention at the Sheraton Hotel, September 14, 15 and 16, 1950.

Preparations are being made for all of the Graphic Arts associations and groups to hold their conventions in Chicago during the Exposition time. Definite dates for the other groups are not final as yet.

Several requests for floor space have already been received by the secretary and placed on file. Distribution of advertising material will be made as soon as headquarters for the Sixth Graphic Arts Exposition are established in Chicago. For further information, write the secretary, Fred W. Hoch, 461 Eighth Ave., New York 1, N. Y.

George T. Bailey, for the last five years Vice President and General Manager of Photogravure and Color Co., specialists in printing by sheet-fed gravure, New York, N. Y., was elected President and Treasurer of the company by the Board of Directors, effective September 16. Mr. Bailey succeeds the late Frederick J. Bittner, who died on August 30. Bailey has been prominent in printing circles for many years, having served as President of the American Institute of Graphic Arts for two years in 1943-44 and 1944-45. He was for many years Manager of the Printing Office of the Yale University Press and was Assistant Printer to the University. Prior to his affiliation with the Photogravure and Color Co., he was Vice President of William E. Rudge's Sons, New York. Mr. Bailey is also a member of the Board of Governors of the Club of Printing House Craftsmen and a member of the Educational Committee of the New York Employing Printers Association. He resides in White Plains, New York.

Vernon G. Eck, an instructor at Dunwoody Institute, Minneapolis, Minn., has been named secretary-treasurer of the Northwest Newspaper Mechanical Conference. He fills the unexpired term of Henry Magnus who resigned his office because of illness. Mr. Magnus is machinist on the Minneapolis (Minn.) *Daily Times*. Mr. Eck, already holding the second vice presidency in the Northwest Conference, cheerfully accepted the assignment.

George C. Brown, a native of Arkansas City, Kas., joined the Printing department of Carnegie Institute of Technology as an Instructor in Machine Composition on September 1, President Robert E. Doherty announced. A graduate of Kansas State Teachers College where he received his bachelor of science degree in 1945 and a master of science degree in 1948, Brown formerly was co-owner and business manager of the Solomon Valley (Kas.) *Tribune*. He also served as journalism instructor in the Chanute (Kas.) city schools. The new appointee is a member of Epsilon Pi Tau, honorary industrial education fraternity.

Mr. and Mrs. Augustus Edward Giegengack of Washington, D. C., and New York announce the engagement of their daughter, Margaret Mary, to Robert William Ayling, son of Mr. and Mrs. Robert de Castro Ayling, of Brooklyn, New York. Miss Giegengack is a graduate of Georgetown Visitation Convent in Washington, D. C. She received

her B.A. degree from the College of New Rochelle, N. Y. Her fiance was graduated with a B.S. degree from Fordham University, New York. Mr. Giegengack, the father of the bride-to-be, is well known to the printing trade. He was president of the New York Club of Printing House Craftsmen and later served as International President of Printing House Craftsmen. In 1934 he was appointed by President Roosevelt to the office of Public Printer of the United States, which position he held until his resignation in March of 1948.

It has been announced that Louis E. Rau will head the reopened Buffalo branch office of the Crocker-Wheeler Electric Mfg. Co. Div. of Joshua Hendy Corp. A graduate of the Newark College

The Crocker-Wheeler Electric Mfg. Co. Div. of Joshua Hendy Corp. will have Louis E. Rau in charge of the reopened Buffalo branch office.

of Engineering, Mr. Rau comes to Buffalo after several years on the staff of the New York district office. The new branch office will operate directly under the New York manager.

Robert B. Huddleston, advertising manager of American Type Founders Sales Corp., died September 16 at his

Thousands of genuine

parts and supplies

Thousands of items that have been in short supply for years are now available so that you can put your machines in first-class operating condition. Prompt shipments are being made and each part meets the strict Linotype standards for precision workmanship and quality materials.

When you replace parts or overhaul your machine with genuine TRADE LINOTYPE MARK parts, you can be sure that renewals and repairs are made with the least possible effort and expenditure of time. Genuine Linotype parts are made to the same factory specifications and with the care and dependability that go into the production of new machines.

Genuine Linotype parts keep your maintenance costs at a minimum.

MERGENTHALER LINOTYPE COMPANY

29 Ryerson Street, Brooklyn 5, N. Y.

Linotype Bodoni Bold and Spartan Family

home in New York, N. Y., after a brief illness. Funeral services were held in New York, September 19, and the body was taken to Laurens, Ia., for interment. Mr. Huddleston was one of the most widely-known men in the Graphic Arts industry throughout the United States. He spent a great deal of his time away from the ATF home office in Elizabeth, N. J., visiting the company's sales branches, attending trade meetings and conventions, and was a frequent speaker before Craftsmen's clubs and other groups. He was educated at the University of California, Berkeley, and took graduate courses at Yale. He was for some years registrar of the U. of C. engineering school, and joined ATF in 1937. Mr. Huddleston was 47 years old. Survivors are his wife, Mrs. Martha Hawley Huddleston; his mother, Mrs. M. E. Huddleston, and two brothers, Kenneth and Donald Huddleston.

IPI announces the appointment of John W. Power as assistant to the president and of William S. Law as Cambridge (Mass.) branch manager. After 50 years of active service in the Graphic

John W. Power is appointed assistant to the president of IPI.

Arts industry, Mr. Power has relinquished his 31 year management of the Cambridge branch of IPI to begin his new duties as assistant to R. W. Smith, IPI Divisional President. He was recently given a testimonial dinner at the Hotel Somerset in Boston, which was attended by 500 people. His new duties will be

IPI announces the appointment of William S. Law as Cambridge (Mass.) branch manager.

associated particularly with the package printing field. The new Cambridge manager, Mr. Law, has been associated with IPI for 19 years. He holds a B.S. degree in Engineering from the University of N. H. He is currently Secretary and a Director of the Boston Club of Printing House Craftsmen. For the past 10 years Mr. Law has been actively engaged as assistant to Mr. Power.

Taken recently at his Connecticut farm, Tim Ryan stands proudly alongside his new Buick station wagon. This auto is substantial reminder that on October 7, 1944 over 1100 of Ryan's friends tendered him a testimonial dinner at Hotel Astor in New York and presented him with an order for a Buick station wagon. Ryan is a vice president of International Printing Ink Corp.

Clarence M. Flint, Director of the American Newspaper Publishers Assoc. Research Department, has been awarded the Presidential Certificate of Merit for outstanding fidelity and meritorious conduct in aid of the war effort against the common enemies of the United States and its Allies in World War II. The presentation was on September 16.

From November 1943 to April 1946, Mr. Flint acted as special assistant and consultant in the Engineering and Transition Office of the National Defense Research Committee, Office of Scientific Research and Development.

The presentation was made by Maj. Gen. Lawrence C. Jaynes, Commanding General of the New York-New Jersey-Delaware Military District of the First Army, and Rear Admiral Carl F. Holden, Commander of the U. S. Naval Base in Brooklyn made an address.

Holds Open House

In conjunction with the observance of Pennsylvania Week and in celebration of the completion of a new two-story addition that adds 100,000 sq. ft. of floor space, the Eureka Specialty Printing Co. of Scranton, Pa., held open house on Wednesday, September 29.

This $250,000 expansion program was started as soon as restrictions were lifted after the war. During the open house, many unusual pieces of equipment were in operation, giving visitors a view of printing, lithographing, plate making, paper converting, die-cutting, and binding. Special exhibits of the work done in each department also were set up.

Another impressive feature of the open house was the presentation of the pleasant working conditions and benefits enjoyed by Eureka employees. These were explained by posters and exhibits, including also informative material on the retirement fund, group insurance, health and accident insurance, and paid vacations available to employees. In addition, the newly organized Recreation Association also presented the story of its activities in sponsoring baseball teams, bowling teams, and other sports and recreations.

Guests were escorted through the plant. Refreshments were served.

This company, organized in 1905, is one of the largest concerns in Scranton, employing about 300 men and women in the various branches of the Graphic Arts.

William Brown, Mechanical Superintendent of the Minneapolis (Minn.) *Star* and *Tribune* retired from active duty during the middle part of September. He has been succeeded by Charles R. McGuire who previously held the position of assistant to Mr. Brown. McGuire is president of the Northwest Mechanical Conference.

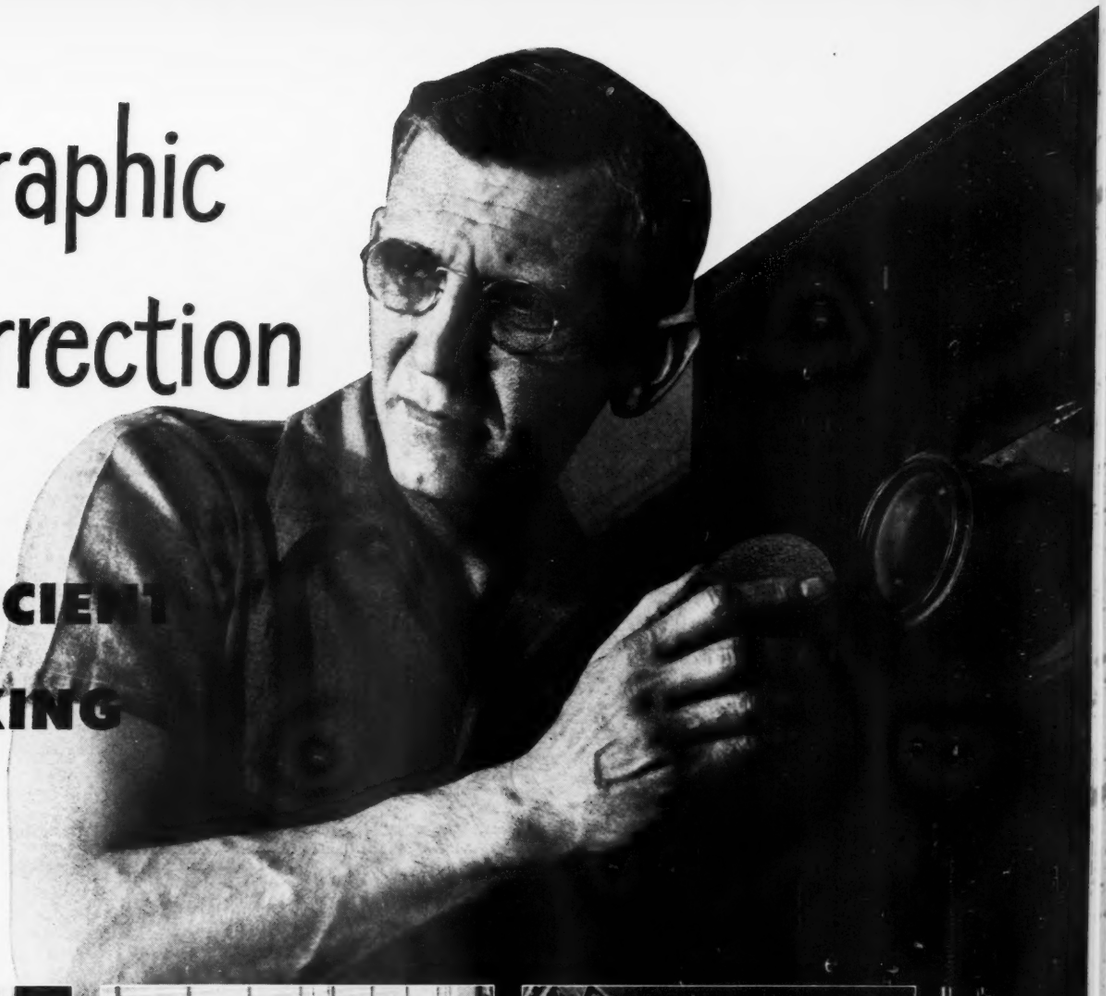
F. L. (Les) Yeager has been appointed Mechanical Superintendent of The Times-Mirror Co., Los Angeles, and will be in charge of production for both the Los Angeles *Times* and the *Mirror*, Los Angeles' new afternoon newspaper. Philip Chandler, Vice resident and General Manager announced Yeager's appointment. Yeager has been a production man all his life. He was 16 years with the Brush-Moore newspapers in Ohio. Then he moved to New York, took charge of all mechanical operations for Pictorial Advertising Corp. In 1937 he

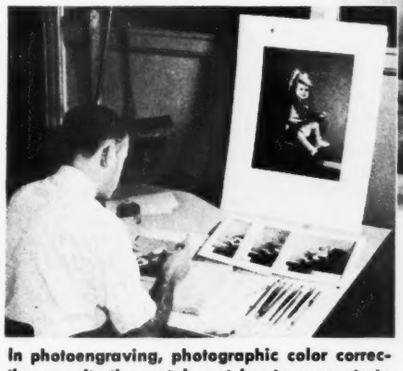
F. L. YEAGER
Mechanical Supt., The Times-Mirror Co., Los Angeles.

started an 11-year stint as production manager of the Indianapolis (Ind.) *Star* and associated newspapers — Muncie (Ind.) *Star*, Muncie (Ind.) *Press*, Lebanon (Ind.) *Reporter*, Vincennes (Ind.) *Commercial*, Huntington (Ind.) *Herald-Press* and Phoenix (Ariz.) *Republic* and *Gazette*. He has served on the Mechanical Committee of the American Newspaper Publishers Association. While with the *Star*, he conceived the idea of coating glass spheres on fabric newspaper press blankets to eliminate first impression offset. There are 50,000 infinitesimal glass spheres per square inch.

Photographic Color Correction

MEANS MORE EFFICIENT PLATEMAKING





In photoengraving, photographic color correction permits the metal re-etcher to concentrate his skill on delicate finishing operations.

In photolithography, the dot-etching artist can do the critical color balancing on a greater number of halftone separation positives or negatives.

The use of Kodak Fluorescent Water Colors and the Kodak Fluorescence Process of reproduction provides automatic color correction.

Four-color process printing by letterpress, offset, or gravure is a tough job. It calls for skilled teamwork of experienced craftsmen—from the camera department to the pressroom.

And in color reproduction, the degree of photographic faithfulness of the ink image to the original copy is the most critical test of its quality.

Masking techniques used in color-separation work from transparencies or prints having intricate color detail can be a great help to the skilled camera operator, dot-etcher, or metal re-etcher. There is a wide range of Kodak materials for the Graphic Arts especially adapted for this work. In addition, Kodak has made available to the photomechanical trade detailed technical information on a number of proved photographic masking methods.

For the preparation of water-color artwork and its photomechanical reproduction, the Kodak Fluorescence Process provides "built-in" color correction that is practically automatic.

See your Kodak Graphic Arts dealer today for materials and information on masking methods and for the complete line of Kodak photographic materials for the Graphic Arts; or write to Rochester.

Graphic Arts Division

EASTMAN KODAK COMPANY, Rochester 4, N. Y.

"KODAK" IS A TRADE-MARK

Kodak

O. B. Powell (left) Chicago, was elected vice president of the International Typographic Composition Assoc. at the Minneapolis convention on September 16, 17 and 18, to succeed Frederick Lutz, Brockton, Mass. (right), who stepped into the presidency as Oscar Hoffman (center) of St. Louis, retired from that office.

Technical Research and Standardization

Activity approved by ITCA—To arrange for special short course training for foremen — Composing industry has reached $100 million mark

By HORACE ANNIS

THE Twenty-ninth Annual Convention of the International Typographic Composition Assoc., held at Hotel Nicollet, Minneapolis, Minn., September 16, 17 and 18 draw an attendance of 232. The 1949 convention was awarded to Boston, the 1950 convention to Chicago and the Midwestern Spring conference to Cincinnati.

A proposal was approved to organize a technical research and standardization department service to members of ITCA. The department will conduct research, make reports and recommendations on all matters pertaining to composing room production in composition plants. Included will be gathering of data on machine and hand operation of all kinds; determination of best methods to be followed in planning production; plans for layout of equipment; investigate factors pertaining to personnel; test and report on new machines, attachments and devices, and to report with recommendations on results of these tests; standardize methods, processes, printed forms used in the trade, bookkeeping methods, and so on. It is expected the department will be in operation shortly.

The convention approved a recommendation made by Executive Secretary Frank M. Sherman to secure cooperation of Rochester Institute of Technology in the creation of a short course for composing room foremen. Such a course would include instruction on the foreman's new duties as the instrument of management, necessity for maintaining accurate production and cost records, instruction covering application of established principles of efficiency in composing room operation, and the like.

Frederick H. Lutz, Brockton, Mass., was elected president and O. B. Powell, Chicago was elected vice president to succeed Mr. Lutz. John W. Shields of Bridgeport, Conn., was reelected treasurer.

Paul J. Ocken, executive vice president of Graphic Arts Industry, Inc., Minneapolis, urged that shop owners and executives spend more time on their business at their shops, directing and guiding the activities and less to civic and social matters during business hours. He urged employers to give each man an opportunity to develop his potential ability to the utmost. He expressed concern over the tendency of the younger generation to want to get "something for nothing" in wage negotiations. Increasing wages without a corresponding increase in production can have no result except to increase inflation, he said.

R. Hunter Middleton, Director of Type Face Design for Ludlow Typograph Co., traced the origin of type faces from the ox head which became the capital A, and evolution from the square caps to lower case, probably brought about, he said, by fast hand writing of the caps. Finally he discussed modern type design, text and advertising typography.

The Mechanical Standards committee, report by Sol Cantor, Composing Room Inc., New York, revealed that the committee has been in consultation with machinery manufacturers in an attempt to bring about the improvements which were impossible during the wartime years. Among the accomplishments he listed was the promise by ATF to restore such type faces as Bodoni Book. Mergenthaler Linotype Co., he said, is working on assembler improvements to eliminate the jamming of matrix side walls. Joseph F. Costello, President of Lanston Monotype Machine Co., was present and expressed hope that his firm would soon have expanded facilities for repair parts and new molds. The department for new machines is also progressing well, he said.

The report of the Trade Customs and Practices committee, of which S. Walter Sears, Minneapolis, was chairman reported that a guide has been prepared as a step toward a standard production manual. Proposed was a character count as a substitute for the 1000 ems basis for measuring production and selling type.

Sol Cantor reported that the Standard Type Specimen Library project has been marking time because of lack of activity among members, but that the executive committee wishes ultimately to have a file of the "bread and butter" type faces, rather than a library of all faces ever put out.

Russell Herrell, executive officer of the Government Printing Office, said that while research in new equipment and methods was halted during the war, the Government Printing Office now is attempting to do something about it. He assured members that the government plant is open to the ITCA as a research laboratory.

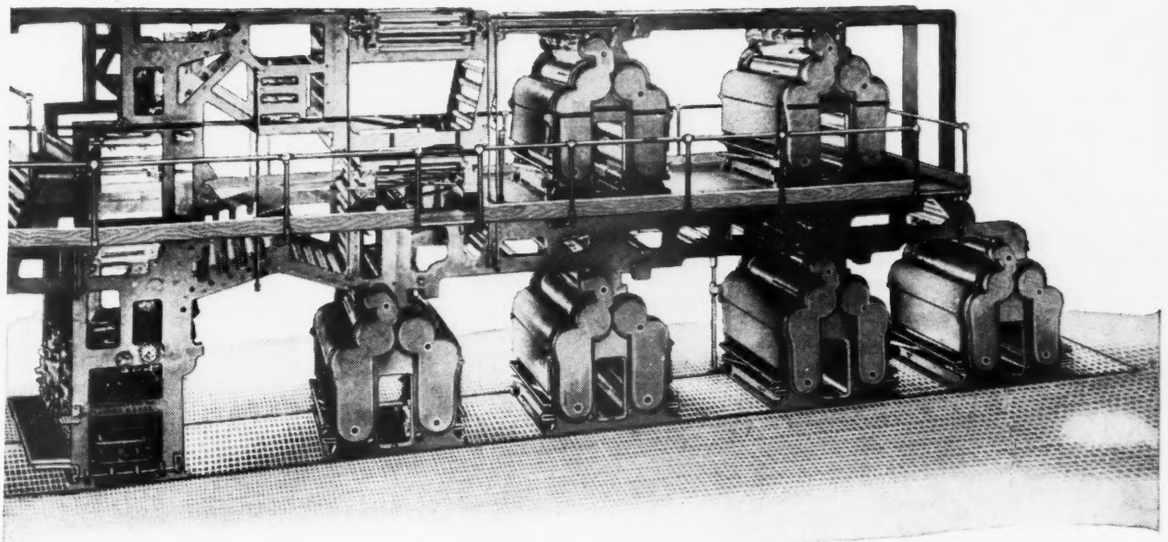
Frank Sherman, Philadelphia, secretary and executive director of the ITCA, reported that the value of composition in the United States and Canada now has reached the $100,000,000 mark and that expanded services of the ITCA are planned to keep in pace with the greater business volume.

Mr. Sherman reported an ITCA gain in one year of 18 active members and four associate members.

Mr. Sherman said he had become convinced that the only way to offset increased cost of production was to secure greater production from men and machines employed in the industry. The ITCA recently completed a 50-shop survey with the aim of devising new methods to accomplish this, he said.

Executive Director Frank M. Sherman reported his estimate that the total volume of commercial composition (including advertising typography, book and periodical typesetting, trade work, offset-lith composition, etc.) produced in the U.S. and Canada amounted to $100 million in 1947. Estimate is based upon accurate figures that 51 "average" ITCA member plants in 1947 did $9½ million business. Since ITCA membership during that year was 325 plants, he projected the estimate that a total of $60 million of typesetting was done by ITCA members in that year. It is estimated that Advertising Typographers Assoc. do not less than $15 million annually. There are more than 450 specialized composition houses in the U.S. which do not hold membership in either ITCA or ATA. It is estimated that these plants probably do not less than $25 million per year. Therefore, the total composition business is $100 million per year.

MOST VERSATILE FOR BLACK AND COLOR PRINTING



SCOTT OCTUPLE PRESS

with 4 Superimposed Color Couples

Four Color Printing is completely separated from regular black printing. This avoids loss of black page capacity when printing colors, permits advance preparation of color runs, provides separate make-ready for each color if necessary and allows editorial changes between editions without disturbing register of color pages.

Color rotation always the same, eliminating reversible cylinders and loss of time, ink and rags for washups.

By means of an ingenious angle bar arrangement Four Color Printing can be easily located on any desired page or section.

Illustration shows one end of a Scott Triple Octuple Press now in operation in the plant of the

DAYTON, OHIO, DAILY NEWS

and others now under construction for the

BUFFALO, N. Y., COURIER-EXPRESS
MIAMI, FLA., DAILY NEWS

Send for new Catalog of the New Scott Press showing various arrangements for Black and Color Printing.

WALTER SCOTT & CO., INC.

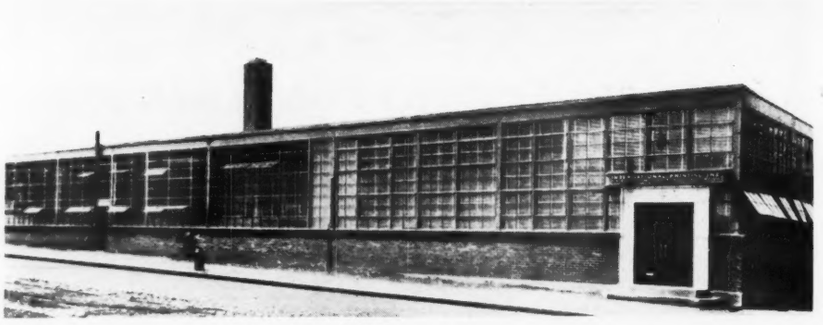
PLAINFIELD, N. J.

Equipment and Supplies

(Continued from Page 32)

GOLDEN EGGS BOOKLET — The J. A. Richards Co. announces a new edition of the *Goose Book*, a creation of J. A. Richards, sr. The first edition was published and copywrited in 1911. The present edition is an example of die-cut

printing and comprises 24 pages of creative ideas—with lessons and illustrations of many die-cut jobs from conception to the finished product. The *Goose Book* is free for the asking; write to J. A. Richards Co. in care of *Printing Equipment Engineer*.



IPI Opens Modern Home—IPI announces a new, modern home for its Philadelphia Branch Office and Service Station. Located just across the street from the old location, the exterior design of the new plant follows a current trend toward simplicity and utility. The interior of the office and color-matching rooms are light and airy with pastel colors on the walls. In the service station section materials flow from loading docks to ink mills. Base ink storage begins a cycle in which all supplies rotate regularly. Base inks in use are accessible to mill hands for weighing and for transfer to mixers and mills close by.

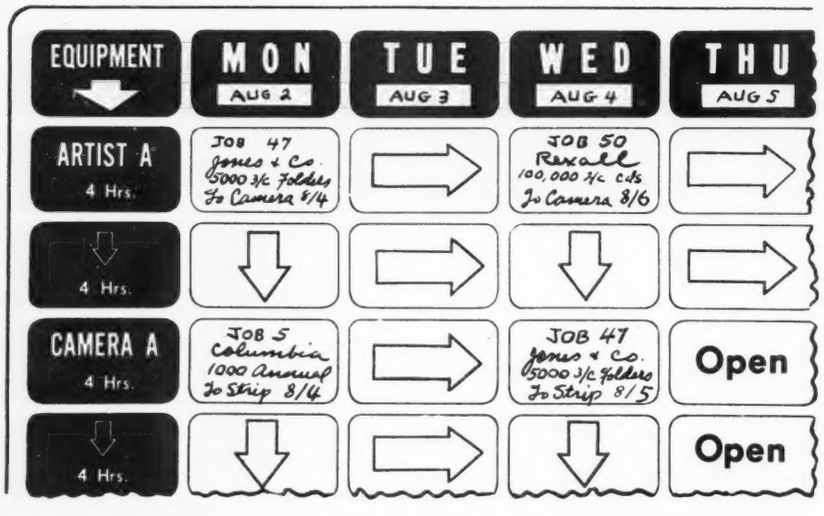
IPI Elects President

AT a recently held meeting of the Board of Directors of Sun Chemical Corp., George W. Ullman was elected president. Elected also were A. C. Horn to Chairman of Sun's Executive Com. and William Recht as a member of the Board of Directors. A. E. Horn and Ernest Nathan were elected vice presidents of the Corporation.

Nolan Star Saw-Trimmer

NOLAN Corporation announces the Star saw-trimmer for use in the composing room. The floor model machine, weighing 330 lbs., is provided with a work table measuring 20 in. by 24 in. A ½ h.p. motor drives the 7 in. diam. saw blade. Standard equipment on the new saw-trimmer includes a 73 pica measuring gauge, a work clamp having a maximum capacity of 42 picas, an aluminum saw guard, and thumb guard. An emery wheel, trimmers, a mitering attachment, batter and line-up gauge, and a built in chip buggy complete the standard equipment. Manufacturer states that other accessories are available including a worklight, Plexiglas saw guard, table

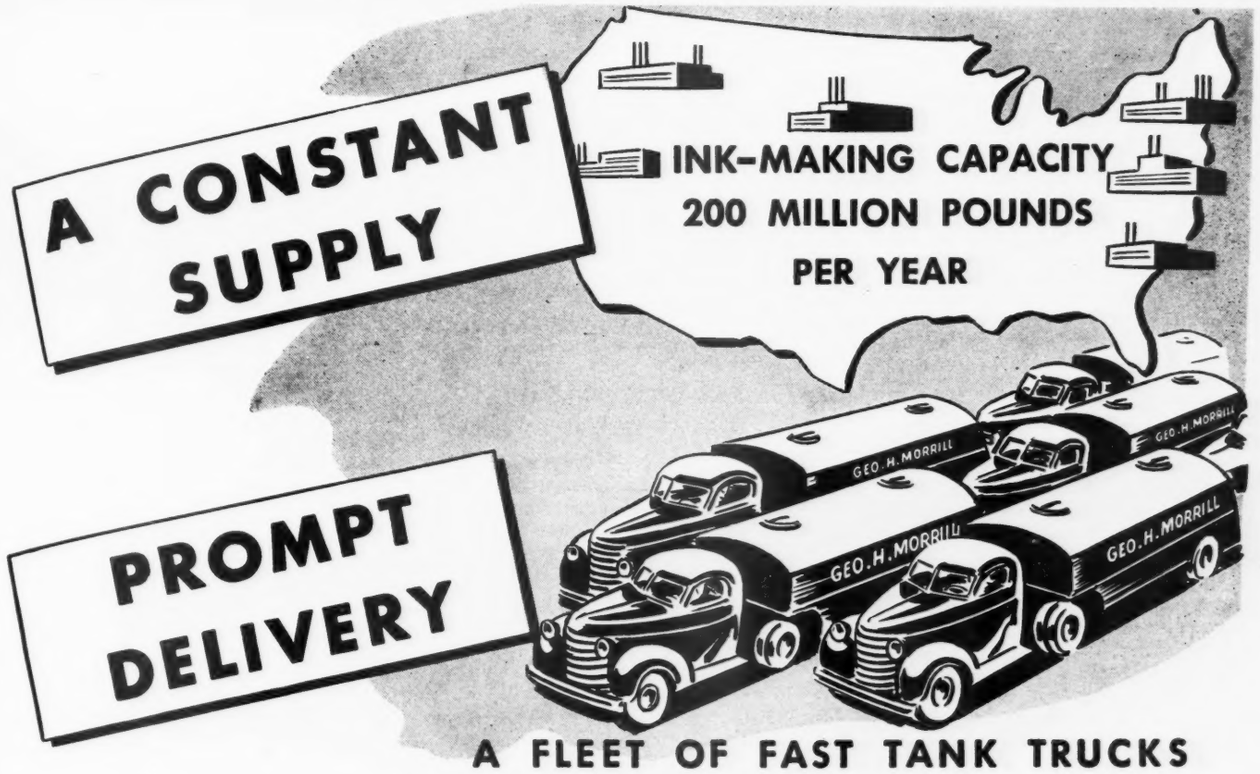
extension bar and belt guard. An arbor raising and lowering device permits raising the saw blade above table level for changing. Further information may be obtained by writing Nolan Corporation direct or *Printing Equipment Engineer* will gladly pass along your request.



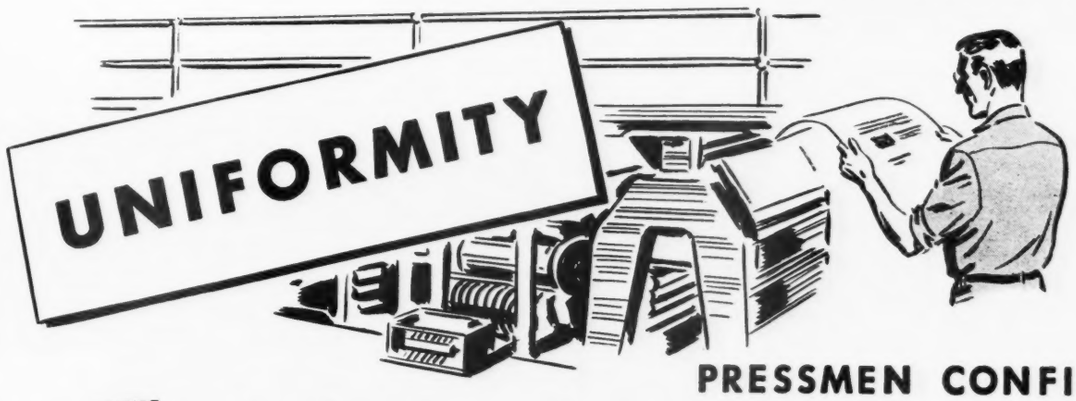
Miniature reproduction in diagram form of a corner section of the Boardmaster printing plant production control. If the size of plant and executive preferences warrant, the board may be set up in multiple so that those concerned with its operation can refer to the production status of any job quickly. This particular illustration refers to a 25-working day Boardmaster set up for use in an offset plant—the board, of course, being adaptable to a letterpress plant. It shows the flow of jobs from one department to another in relation to time consumed and dates. Days of the week with their dates extend horizontally across the board while the various plant departments are shown in the vertical column at the left—these including, of course, in addition to those shown in the illustration, Stripping, Plate, Presses, Stock to Press, Bindery, etc. Cards in contrasting colors are slipped into projections on the metal board; these cards indicate departments; white cards indicate open time. As each day's line moves across the board, jobs are scheduled a month in advance.

Boardmaster Production Control

BOARDMASTER, a production control system, has been announced by Graphic Systems. The board is applicable to letterpress as well as offset printing plants. In use, the board indicates the flow of individual jobs through all mechanical departments over a four-week period. The board is adaptable to individual plant needs and facilities. Overall size of the Boardmaster is 24 in. high by 38½ in. wide. Its weight is 11 lbs. It is manufactured of aluminum and is supplied with dark elumilite finish to furnish contrasting background with the tickets or cards used in the scheduling



A FLEET OF FAST TANK TRUCKS
OPERATING FROM STRATEGIC POINTS



PRESSMEN CONFIRM IT

That's what is back of

GEO. H. MORRILL
GENERAL PRINTING INK DIVISION
100 SIXTH AVENUE, NEW YORK 13, N.Y.

NEW YORK · BOSTON · CHICAGO · DETROIT
MINNEAPOLIS · ST. LOUIS · FORT WORTH
SAN FRANCISCO · LOS ANGELES · SEATTLE

Sun CHEMICAL CORPORATION

WORLD'S LARGEST MANUFACTURER OF NEWSPAPER INKS

Miniature reproduction of top section of Job Ticket recommended for use in connection with Boardmaster production control in any printing plant. The form is printed in duplicate by each plant installing the Boardmaster. When a job comes into the plant, the scheduler fills in this form in duplicate. The scheduler retains the carbon copy and posts the information about the job on the board. He files the copy near the board for follow-up purposes. The signal or little clip shown at the top of this form, is moved across the form as the job flows through the plant, thus always showing the completion date of the next operation.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

JAN FEB MAR APR MAY JUNE JULY (AUG) SEPT OCT NOV DEC

SCHEDULING INFORMATION

Order Entered	Art Due	Comp. Due	Blues Due	Pasteup to Customer	Return Pasteup	Job to Strip	Job to Plate	Stock Due	Job to Press	Job to Bindery			Ship On
8/2	8/6	8/11	8/12	8/16	8/19	8/20	8/25	8/24	8/26	9/10			9/14

CUSTOMER R. B. Henty & Co. Date 8-2-48

ADDRESS 47 N. Avon Blvd.
Oakdale, Mich.

Order No. 4735

and workflow operations. It is recommended that the board including duplicate boards, if necessary, be placed where it will be accessible to production, mechanical, business and sales executives.

Along the upper part of the Boardmaster in horizontal row are shown the days of the week and dates of the month. At the left side of the board in a vertical row are tickets bearing the various departments concerned in the production of a job.

Interchangeable cards in six contrasting colors (white, blue, green, salmon, canary and buff) are slipped into projections extending outwardly in rows across the board. The cards measure 1⅜ in. wide by ¾ in. high. When in position between the clips the cards buckle slightly. The cards will accommodate four rows of typing, or the information may be pen-drawn.

The six colored cards (each removable and replaceable) each designate a different operation; the white cards are used to indicate open time. The small vertical arrows on the cards indicate jobs continuing from one time segment to another (departments set up with each horizontal row indicating 4 hrs., 2½ hrs., etc.). The horizontal arrows on the little cards shows jobs requiring more than one day.

The Boardmaster may be adapted as part of a printing plant's present system as follows: The job ticket is first written by the order department in duplicate. The order writer then consults with the scheduler on filling in the dates of customer contacts such as *Art Due*, *Pasteup to Customer*, *Ship*, etc. The scheduler then sets up the in-plant schedule while the ticket still is in duplicate form.

After completing the schedule the main ticket is sent to the plant for processing while the carbon is retained by the scheduler for follow-up purposes. The scheduler can file his copy in a file near the board for quick reference when details of a job are needed.

Each board will accommodate 25 rows across and 25 down, or a total of 625 individual cards. For plants requiring more space to show their operations it is recommended by sponsor that additional boards be hung adjacent to one another and information continued from one unit to another.

Further information concerning the Boardmaster may be obtained from Graphic Systems in care of *Printing Equipment Engineer*.

Copper Colorimeter for Photo-Engravers

THE PER (Photo-Engravers Research) Copper Colorimeter, a compact instrument for production control of ferric chloride solutions used for copper etching in photoengraving plants, was developed by Battelle Institute (Columbus, O.) in a research program sponsored by Photo-Engravers Research, Inc. Based on the principle of devices for pH determination, the PER Copper Colorimeter is a scientifically designed instrument of simple nature for easy and accurate determination of the copper content of ferric chloride etching baths.

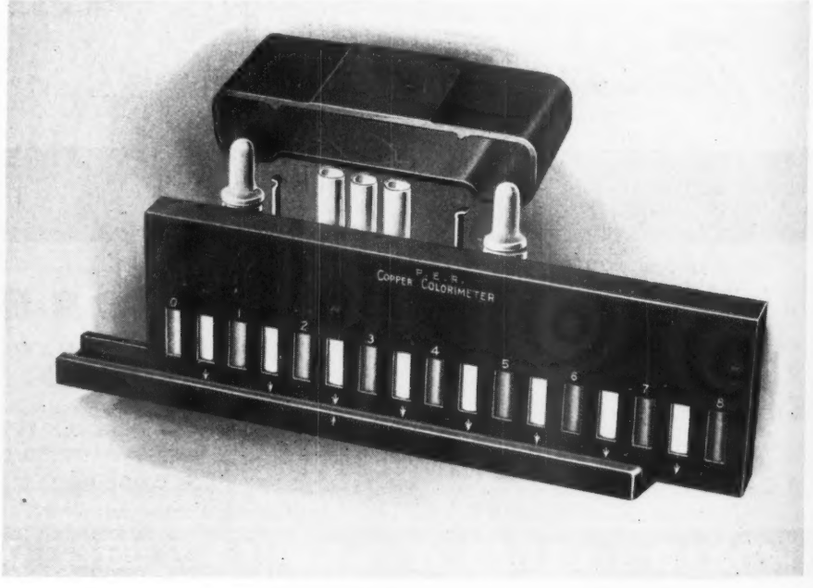
It enables the photoengraver to ascertain quickly just how much dissolved copper (cupric chloride) is present in the bath, and, thus, appraise the working efficiency of the solution. Engravers have heretofore been forced to depend entirely on personal judgment to determine the degree of copper concentrating and the attendant rate of etching. With the PER colorimeter, samples of used baths are compared colorimetrically with standardized solutions of known copper content, thus permitting accurate determination and knowledge of the etching properties of fresh and used baths.

The colorimetric method permits accurate measurement of ferric chlorid solutions by the simple procedure of matching the color of used baths against standards of colored copper solution, the standards indicating the number of ounces of dissolved copper per gallon of used bath.

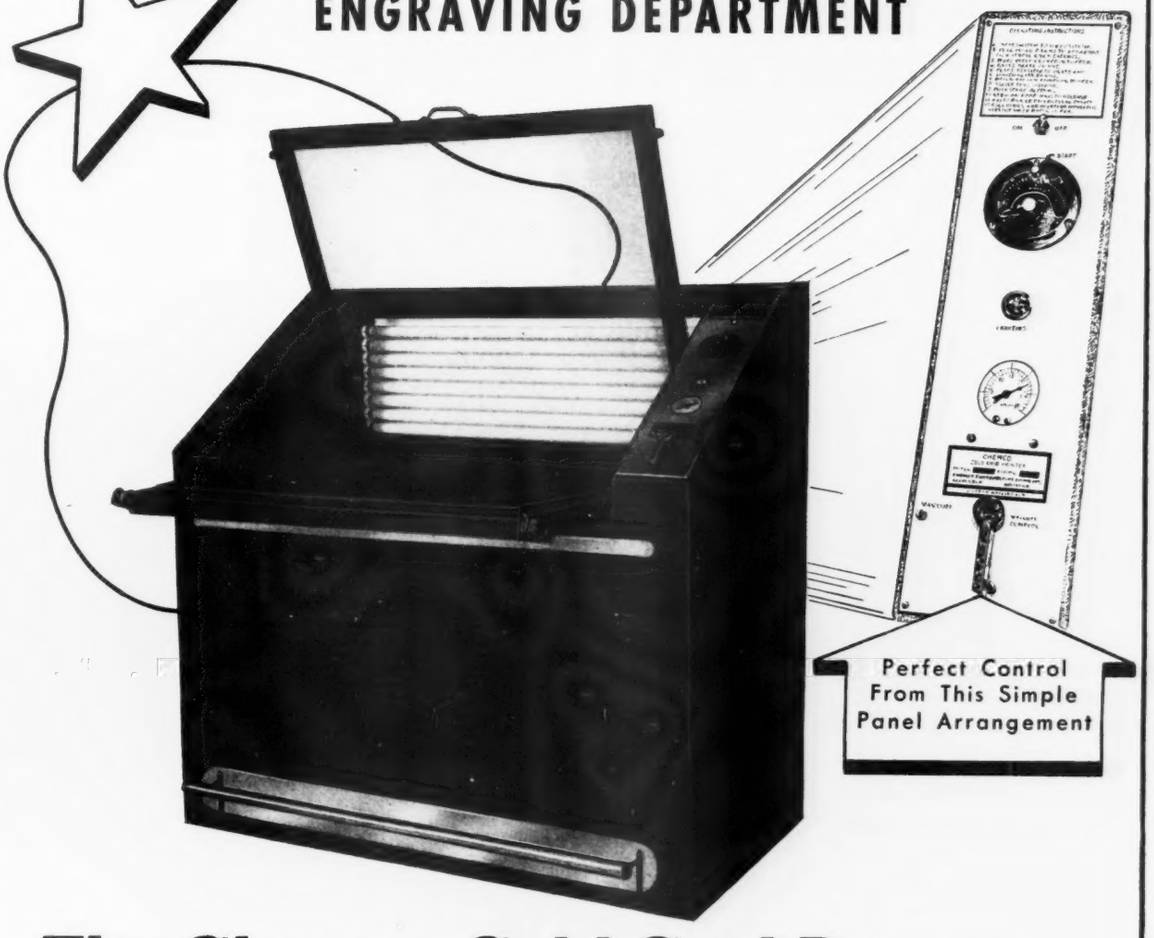
Nine standards are incorporated in the colorimeter, these ranging from 0 to 8 oz. of cupric chlorid. The copper content is expressed in actual full (undiluted) strength of the ferric chlorid solution, a sample of fresh bath being used in conjunction with used solution for testing of old baths.

As indicated by the illustration, the colorimeter is a simple but scientifically designed device, which can be used by any craftsman possessed of normal color vision. It requires no calculation or scientific training on the part of the user—all that is required is to match the color of a sample of used bath with one of the standards on the colorimeter. Baths of weaker copper concentration (2 to 4 oz. per gal.) will display a dark golden yellow hue, whereas heavier concentrations (6 to 8 oz.) will show a somewhat "dirty" yellowish green tint.

Modern Photoengraving Publishers, 166 W. Van Buren St., Chicago 4, Illinois, have been authorized by Photo-Engravers Research, Inc., to act as sole distributor and agent for the PER Copper Colorimeter. The PER Copper Colorimeter is manufactured by W. A. Taylor & Co., Baltimore, Md.



A *NEW* STAR PERFORMER FOR YOUR ENGRAVING DEPARTMENT



The Chemco Cold Grid Printer...

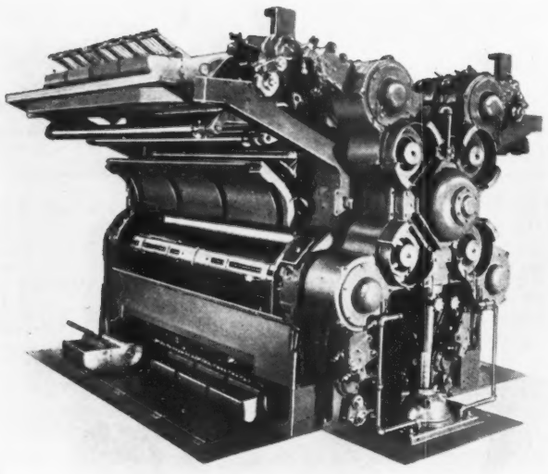
joins the rest of the line of machines which make for high production with minimum effort for the photoengraver.

Printing frame and self contained light source, composed of a grid of closely spaced fluorescent tubes specifically made to Chemco specifications, furnish a light source capable of a rapid exposure of the bichromated metal surface. Power consumption of only 800 watts furnish a uniform intensity of light to the entire usable printing surface of 25" x 32".

The extremely low cost of operation, complete lack of fumes, smoke and heat, coupled with uniform printing qualities make this printer the finest of its kind on the market today. Contact your Chemco representative at once.

CHEMCO PHOTOPRODUCTS COMPANY, INC.

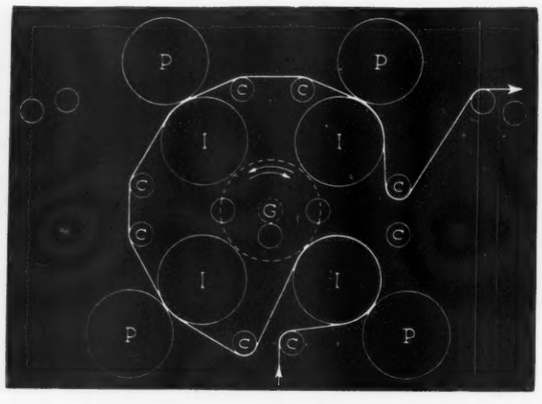
Works — Glen Cove, N. Y. — Branches In All Principal Printing Areas



View of Wood Newspaper Color Press Unit. Four individual plate and impression cylinders are grouped about central driving gears. Individual fountains (four across the unit shown at left) are quickly replaceable.

Wood Newspaper Color Press

WOOD Newspaper Printing Machinery Corp. announces that its Newspaper Color Press in combination with the recently announced Wood Stereotype Color Plate Pre-registering Machine permit the production of multi-color editions with practically the same speed as newspapers printed entirely in black ink. Features of the new Wood Newspaper Color Printing Press are announced as follows: Short leads which cut down possibility of paper web stretching—one of the chief causes of mis-register; single-gear control of color and black printing cylinders for elimination of backlash; individual color ink fountains are readily accessible and are removable in a few seconds. The color units may be used for printing straight black runs. Individual couples are reversible to give flexibility of color position. Further information may be secured by addressing your request to Wood Newspaper Machinery Corp. in care of *Printing Equipment Engineer*.



Cross-section diagram of Wood Color Newspaper Press unit. In this diagram, the press is plated to print three colors on one side of the web and black on the other. Either side of the web can be first or second impression. It is possible also to arrange the press to print two webs on two sides of the sheet in black only. In another arrangement the unit can be made to print four colors on either side of the web. There are four impression and four plate cylinders arranged around central gears.

Announces Color Separation Plates

TWO improved Kodak plates for color separation in photomechanical reproduction — Kodak Separation Negative Plate, Type 1, and Kodak Separation Negative Plate, Type 1, Matte—have been announced by the Eastman Kodak Co.

These new plates have been specifically designed for continuous-tone separation from Kodachrome and Kodak Ektachrome transparencies. They are claimed to contain an extra safety factor of exposure latitude which will greatly reduce the possibility of exposure errors, and resultant makeovers. The ability of these new plates to record a much wider density range than has heretofore been possible provides added flexibility and economy, especially for the color operator in photomechanical work. The excellent shadow contrast obtainable with these new plates permits low minimum density in shadow areas without loss of essential detail.

Manufacturer states these new plates have high exposure speed, good panchromatic sensitivity and freedom from grain.

Manual Starting Switches for Fractional-H.P. Motors

A LINE of manual starting switches for use with fractional h.p. motors has been announced by General Electric's Control Division. The switches are furnished in five different types: with general-purpose enclosure; without enclosure; a combination unit and selector switch; with cast iron enclosure for wet locations, and a similar type for dusty or hazardous locations. The switches are desirable for use with fractional h.p. motors driving blowers, pumps, ventilating systems, small machine tools, and a wide variety of similar applications.

A feature of all five types is a molded base of moisture-resisting insulating material which mounts and encloses the

Above is shown one of General Electric's new line of manual starting switches for use with fractional h.p. motors.

mechanism and contacts. This construction serves not only to protect the operating parts from dust and physical contact, but to direct the heat concentration to the bimetallic tripping device, to assure that the action of the overload is quick and positive. Another feature is the action of the switch handle, which moves to the *off* position on overload, thus giving positive indication that the power is shut off. The wheel-type movable contact cleans as it rolls against the stationary contacts, and, in addition, recedes into a recess in the base, thus effectively snuffing the arc.

All parts of these switches are rust-resisting, accessible wiring terminals on the tops of the units facilitate easy wiring, and the screws for fastening the molded back cover are attached to the cover to prevent being lost.

Merix Anti-Static Compound

THE newly improved Merix Anti-Static Compound No. 79, states Merix Chemical Co., is used by wiping the liquid on the press cylinder, bed or packing to prevent paper adherance as caused by static accumulation. The compound may also be included in printing inks or raised printing compounds. May be applied by spray, wiping or with a brush; claimed to be non-inflammable, is fairly fast drying and is not visible when dried. Please address your request for further information to *Printing Equipment Engineer*.

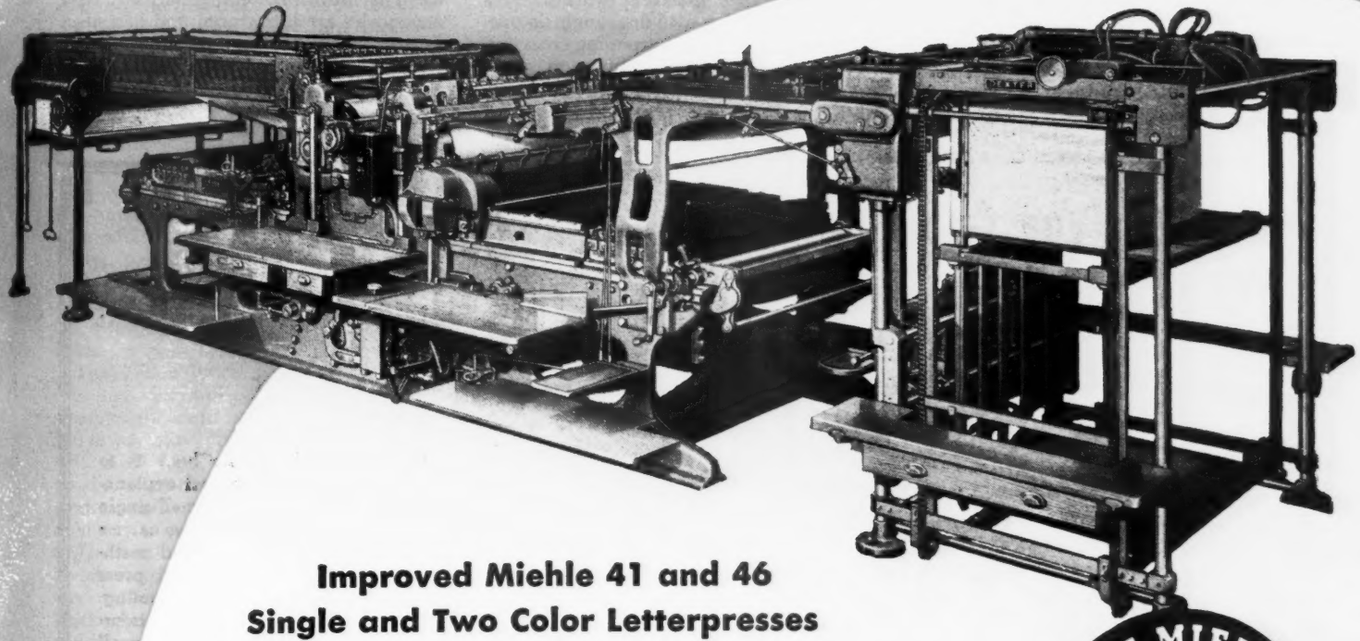
Laurenty Appointed

The appointment of Floyd Laurenty to composing room superintendent of the Schenectady (N.Y.) *Union-Star* has recently been announced. Mr. Laurenty, a native of Schenectady, is a graduate of Schenectady High School and learned the printing trade at the Schenectady *Gazette* where he has been assistant night foreman for the past five years. He is past president of Typographical Union No. 167 and past vice president of the Empire State Typographical Conference.

...in Los Angeles it's MIEHLE

MORE THAN 225 new postwar Miehle presses have been added to the thousands already operating in the Los Angeles area. This demand for Miehle equipment is based on the experience of large and small plants in securing maximum production at minimum cost with Miehle presses . . . even on the toughest jobs. The constantly high production turned out by Miehles is based not on press speed alone, but on steady, dependable operation as well . . . on *all kinds* of runs . . . together with simplicity of adjustments, complete accessibility and other features which reduce down time between runs—*these* are reasons why printers and pressmen prefer Miehle.

It is true in Los Angeles, and wherever fine printing is done—*printers depend on Miehle.* Visit a neighboring plant—ask the man who runs one—and you will see why Miehle presses are your logical choice for maximum production of highest quality work—day in and day out.



Improved Miehle 41 and 46 Single and Two Color Letterpresses

Included among recent installations in the Los Angeles area and throughout the country are many of the improved Miehle 41 and 46 Single Color and Two Color Letterpresses. Here are some of the features of these modern presses which mean *real production:*

New Dexter Stream Feeder • Positive Chain Delivery • Four Roller Distribution • Convenient Accessibility • Simple Adjustments • Steady, Dependable Operation

Write for new catalog describing these new letterpresses.

THE MIEHLE 41 LETTERPRESSES 46 Product of years of development

...ask the man who runs one

MIEHLE PRINTING PRESS & MFG. CO.

2011 HASTINGS STREET (14th and Damen)

CHICAGO 9, ILLINOIS

Equipment and Supplies

(Continued from Page 52)

APS Newspaper Supply Catalog

WITH its assembled price list and postcard page, American Publishers Supply, Inc., has published a newly revised edition of its catalog of newspaper equipment and supplies. Considerable equipment and supplies for the stereotype platemaking process are described and illustrated. Some line-composing machine supplies, router bits, composing room saws, cutters and tools are included. Price list (subject to change without notice) is bound in the back of the book. Heavy red cover with loose leaf binding. Size: 8⅞ in. by 11¼ in.

MMM's Splicing Tape

A NEW Scotch tape for permanent mill press splicing, carbon paper splicing, and unifold and manifold splicing was announced in September. The new tape is designed to remain a part of the finished work and need not be cut out, according to the producer, Minnesota Mining and Mfg. Co.

Called Scotch acetate fibre tape No. 750, the tape is made in transparent, white and brown, in a four mil thickness with a variety of widths. Transparent and white variations are also available with lengthwise perforations in widths of ½ in. and ⅜ in.

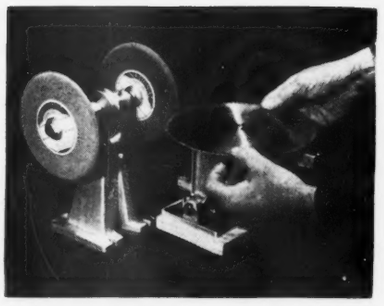
The tape, which has a tensile strength of 25 lbs. per in. of width, has a pressure-sensitive adhesive and a backing composed of cellulose acetate film laminated to a long-fibre tissue. It will not discolor.

The adhesive is resistant to weather, sunlight, heat and moisture, does not bleed into or through paper, and does not ooze at the edge of the tape.

Desk pads, check books, bowling pads, calendars and similar products can be bound with the tape, the producer announced, and it can be used to edge business forms, cards, and papers in loose-leaf books. It is also expected to be used for uniting sheets of transparent or colored acetate film into envelopes.

Treyco Saw Fixture

A SAW Sharpening Fixtures has been announced by Treyco Products which holds and permits turning saws for precision sharpening. By mounting the Treyco Fixture on the same base with the power-driven grinding wheel, the saw sharpening equipment is a self-contained unit. It is designed to sharpen three types of circular saws by using two different shaped grinding wheels. One of three wheels has a 45 deg. angle on one side. This is used for sharpening cross cut or fine teeth on the combination saws. The other grinding wheel is 5/16 in. wide with a radius for use on rip saws and for



large teeth on combination saws. The saw teeth are brought up to the grinding wheels at right angles. Further information may be obtained by writing Treyco Products direct or in care of *Printing Equipment Engineer*.

Metallizing Equipment Catalog

METALLIZING Engineering Co., Inc., announces a new catalog of metallizing equipment and supplies, entitled *The Best of Everything for Metallizing*. Among the descriptive eight pages can be found metallizing guns, air and gas controls, spray booths and dust collectors, blast machines and nozzles, and air compressors. Each piece of equipment is illustrated and described. New accessories are introduced and described in the catalog. Copies may be secured by addressing your request to Metallizing Engineering Co., Inc., in care of *Printing Equipment Engineer*.

72,000 Type Combinations To Work From . . .

Included among the valuable information in the new Omnibus of Type Faces are 72,000 combinations of widely used text and display faces for the printer and layout man to choose from. View in a moment through the Type Visualizer how a typical paragraph of Bodoni, Caslon, Baskerville, Garamond, or any of 72 other text faces will look when combined with any one of more than 1000 display types.

The Omnibus Offers You These Features

A scientifically determined type color rating for the most widely used text faces.

Largest collection of single line type face specimen lines ever assembled.

Type Resemblance Chart — a grouping of approximately 400 display faces in 52 categories.

Old-Fashioned Type Faces—117 display lines used for special effects.

$3.10 per Copy

The Supply Is Limited

Owing to narrow handling margin, please send cash or check with order

***Available from* Printing Equipment Engineer**

1276 West Third Street Cleveland 13, Ohio

The Single Color

Offset Press

By I. H. SAYRE

THE PURPOSE of this book is to offer a detailed technical explanation of the operation of the small single color offset printing press. It also carries recommendations for approved methods of printing technique and press care which apply to all offset printing. Much of the technical operating information applies to all makes of small offset presses. Should be in the library of all executives interested in offset printing.

Section I deals with Harris offset presses.

Section II deals exhaustively with materials used in offset printing.

Section III deals with ATF's Webendorfer single-color offset presses.

Generously illustrated with 99 figures in line and halftone; 284 pages; size, 6 in. by 9¼ in.; bound in blue cloth, cream stamped lettering.

Price $6 per copy

Because of the small handling margin please enclose cash with order

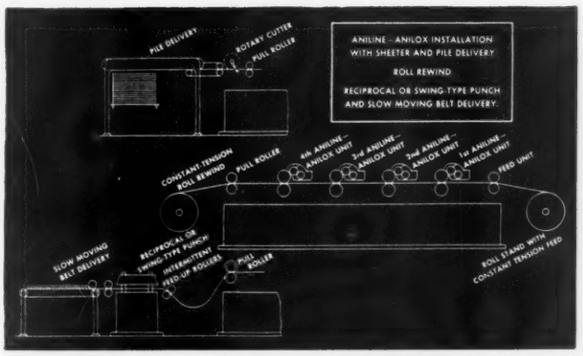
Printing Equipment Engineer 1276 West Third St. Cleveland 13, Ohio.

Champlain's Aniline Press

THE Champlain Co. recently completed the first installation of its new aniline press. Primarily for board converters and package printers, the press is designed to deliver printed, die-cut, scored and stripped cartons at speeds up to 600 ft. per min. Other stocks, states sponsor, can be delivered at similar high speeds. The web, which is roll fed, is of the straight-through type and at waist level, affording constant view of all operations. The three types of delivery which are available are roll rewind, sheet delivery and carton-blanker with slow moving belt delivery. As in the case of Champlain rotogravure, any number of colors can be printed on one or both sides of the web. Varnishing can also be done in the same operation.

One of the features of this press is that only the printing cylinder need be removed when a plate change is necessary. This is accomplished by a single throw-off which releases the printing cylinder from both the impression and inking rollers.

Push button register control is standard for the unit although automatic electronic control may be added as extra equipment. In either case 360 deg. running register is obtained. Printing may be done over the full minimum-maximum range of the web size.


ANILINE - ANILOX INSTALLATION WITH SHEETER AND PILE DELIVERY
ROLL REWIND
RECIPROCAL OR SWING-TYPE PUNCH AND SLOW MOVING BELT DELIVERY
PILE DELIVERY
ROTARY CUTTER
PULL ROLLER
CONSTANT-TENSION ROLL REWIND
PULL ROLLER
4th ANILINE ANILOX UNIT
3rd ANILINE ANILOX UNIT
2nd ANILINE ANILOX UNIT
1st ANILINE ANILOX UNIT
FEED UNIT
SLOW MOVING BELT DELIVERY
RECIPROCAL OR SWING-TYPE PUNCH INTERMITTENT FEED-UP ROLLERS
PULL ROLLER
ROLL STAND WITH CONSTANT TENSION FEED

Mono-Block Embosser

DEVELOPMENT of the Mono-Block Embosser has been announced by George J. Prager of Unicrafts Inc., designer, and W. H. Ware, president of Hobbs Mfg. Co., manufacturer of the machine. The embosser is designed for use in the paper, foil, plastics, Graphic Arts, and leather fields.

The Mono-Block Embosser will accept any weight of paper from tissue and glassine, to board stock at speeds up to 300 ft. per min. The unit will also handle foils, artificial leather, and textiles. The unwind and rewind stands can accommodate rolls of material up to 40 in. diam.

There are two models—straight screw pressure control and a hydraulic control model—both of which feature mono-block construction, quick roll changes and silent drive.

The machine frame is rigid steel unit. The housing for the embossing roll carries the bearings, lubrication, oil seals and space sleeves in a self contained unit to permit quick roll change. The housing may be transferred from one roll to another without loss of lubrication. Heavy duty, self aligning roller bearings are employed.

The driving arrangement consists of a direct V-belt drive to the rewind and embossing head. The unwind consists of a square unwind shaft, roll chucks, and tension brake, mounted in self-locking bearing housings. The unwind shaft is adjustable in two directions. The two idler rolls are parallel to the female embossing roll. The rewind consists of a square rewind shaft mounted at one end in a self-locking bearing housing, and coupled at the other end to the driving clutch.

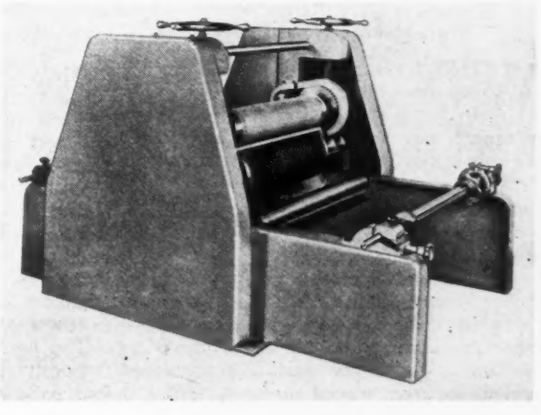
Standard screw pressure (32 in. and 42 in. models) are designed for operation with a 5 h.p. Reeves gear head Moto-Drive, or equivalent. On the 52 in. model 7½ h.p. is required. On hydraulic pressure (32 in. and 42 in. models) 7½ h.p. is required. On the 52 in. model 10 h.p. is required.

The machine will accommodate embossing rolls of 2 to 1 ratio; bored or solid steel rolls from 6 in. to 8 in. diam., and paper rolls of 12 in. to 16 in. diam. Top embossing roll is changed by removing two bolts for each bearing housing cap. The bottom roll requires removal of one bolt in each housing cap.

An inking attachment is available.

Both models of the Mono-Block are available in three sizes: 32, 42, and 52.

For details write to Hobbs Mfg. Co. in care of *Printing Equipment Engineer*.



Shown here is the Standard Model Mono-Block Embosser with straight screw pressure control. Other model controlled hydraulically. Machine accepts materials up to board stock at speeds up to 300 f.p.m.

Gear and Cylinder Chart

A GUIDE for the selection of the correct gear and cylinder for rubber plate printing requirements is available in a Selector Chart issued by Mosstype Corporation. The chart itself is composed from an explanation of how to determine the diameter of a bare cylinder before the rubber plates are mounted. This is accomplished by subtracting double the thickness of the rubber plate from the gear pitch diameter. For example, if 10 Pitch gears are used and a printing circumference of 15,080 in. is desired, the correct pitch diameter would be 4,800 in. Therefore, if the rubber plate (including sticky-back) is 0.125 in. thick, subtract 0.250 in. from 4.800 in. and the resulting figure of 4.550 in. is the diameter of the cylinder before the plates are mounted.

Included under the Diametral Pitch heading on the chart is the printing circumference and diameter and the number of gear teeth on 8, 10, 12, and 20 Pitch gears. Similar information is found under Circular Pitch which includes ¼ in. and ½ in. gears.

Copies of this chart may be obtained by addressing your request to Mosstype Corp., in care of *Printing Equipment Engineer*.

Type Specimen Booklet

A REVISED edition of the 32-page, pocket-size booklet, *The Handy Index of American Types*, is available from American Type Founders Sales Corp., 200 Elmora Ave., Elizabeth B, N. J., or any of its branch offices. In the booklet are presented samples of each of 235 of the most popular of ATF printers' foundry type faces, including the new Contact type, with comparisons of width, sizes of bodies with length of ascenders and descenders on each face, point ranges available, and an arrangement by styles so a type can be found quickly even if the name has been forgotten. It also provides an easy method for a printer to index his own types for ready reference, or to help a new compositor.

Linotype's Corona

CORONA, Linotype's newest legibility face, is now available with Erbar Bold, according to an announcement by the Mergenthaler Linotype Company, in sizes 5, 5½, 6, 7, 8, 10 and 12 pt. Several examples of the newly cut sizes follow:

5 Point Linotype Corona with Erbar Bold

ABCDEFG abcdefghijklmnopqrstuvwxyz 123456
ABCDEFG abcdefghijklmnopqrstuvwxyz 123456

8 Point Linotype Corona with Erbar Bold

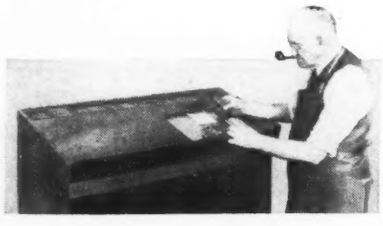
ABCDE abcdefghijklmnopqrstu 12345
ABCDE abcdefghijklmnopqrstu 12345

12 Point Linotype Corona with Erbar Bold

ABCD abcdefghijklmnop 123
ABCD abcdefghijklmnop 123

Foster Working Tops

M. B. BARROWS, Sales Manager of Foster Mfg. Corp., announces a composing room Working Top, manufactured in two sizes, 44 in. long for an 8¾ in. by 13 in. galley cabinet and 57½ in. long for a 12 in. by 18 in. cabinet. Designed primarily to lock securely on top of a four-tier galley cabinet, it can also be placed on a table. The proper



slant and height make for convenience. A retaining ledge is provided on the right side and along the bottom. There is sufficient room to accommodate two men working together in correcting and makeup. The adjustable lead and slug rack along the top of bank will hold numerous sizes and quantities of material. The construction is of a heavy guage steel and it is finished and polished in green-baked enamel.

For further information, write to Foster Manufacturing Corporation.

Non-Misting News Ink

WHAT is claimed to be a non-misting news ink has been developed by J. M. Huber Corp. According to report, experimental tests completed recently in the New York *Daily News* and the Providence *Journal-Bulletin* pressrooms show that ink misting is substantially reduced with this aqueous-emulsion ink.

Jay Bisen, ink chemist at the New York *Daily News*, reports: "We have been using the Huber special news ink for more than two weeks on three presses running at 45,000 per hour. During this period, we have placed sheets of newsprint at various locations in the pressroom and have compared them with sheets exposed the same length of time to regular ink. The results, which have been duplicated a number of times, show that the Huber ink eliminates a substantial amount of ink misting."

At the Providence *Journal-Bulletin*, the ink was run on one unit first, then on a complete press, and finally in the whole pressroom. Press speeds were 36 to 40,000 per hour. According to George L. Green, production manager of this newspaper, "There was considerable improvement in ink misting throughout the pressroom. By placing papers in various locations we found that the ink that settled was substantially less when running with aqueous-emulsion inks than when running with standard news ink."

The new ink has been designated Huber NMP (Non-Misting Pelletized) News Black. It is an aqueous-emulsion ink using Huber's pelletized carbon black produced by the company at its Borger (Tex.) plant. In this dustless form the black is shipped in sealed hopper cars to Huber ink plants where it is formulated into news ink without being exposed to daylight.

Adhesive For Interleaved Carbon Form Sets

AN ADHESIVE designed for hand brush application is useful to printers who make interleaved carbon office forms in sets. Applied cold by the back padding method to a stack of forms, the adhesive penetrates between the sheets and carbon stubs and, after a short drying period, the stack can be separated into sets by cutting with a knife.

Manufactured by Paisley Products, Inc., it is reported that the new adhesive is a synthetic resin emulsion cement, white in color, and dries with a non-tacky, flexible film that allows the forms to feed properly into typewriters, billing machines and other office machines. The manufacturer also states the adhesive is suitable for all paper office form stocks, will not discolor goldenrod colored papers, and the final sets will not fuse together in hot, humid weather. A laboratory report describing the properties and methods of applying the adhesive is available from the manufacturers by addressing requests to Paisley Products, Inc., in care of *Printing Equipment Engineer*.

Shelf Mold Is Announced

THE Triangular Shelf Mold for All-Measures—a new development for Intertype's four-mold disk—is announced in *Intertype Mold System*, a 48-page book recently printed by Intertype.

With the all-measure mold, it is explained, any length of slug, without restriction, can be produced by placing the mold cap in proper relation to the liners being used. Molds of the new design are available for slugs up to 30 or 42 picas in length and up to 48 pts. in thickness.

The book covers every style of mold currently manufactured by Intertype for four and six-mold disks. Illustrated and collated with part numbers, each mold and its components are described in a 20-page section. Related subjects, such as alignment systems, accents, mold maintenance, etc., are covered on introductory pages. These are over 50 representative specimens of advertising figure work.

Copies of *Intertype Mold System* will be mailed on request to Intertype Corp., in care of *Printing Equipment Engineer*.

Low Temp. Repair Alloy

A LOW temperature bronze base permanent repair alloy industrial repair and maintenance applications has been announced. Lo-Temp, the repair alloy, handles like putty at 300 deg. and fuses with the metal surface under repair. Manufacturer states finished repair can be machined, filed, drilled and tapped, and that the low temperature required will not cause crystalization or distortion. It is claimed that Lo-Temp will not corrode, run, crumble, shrink, or dry out, and that it works with any metal except aluminum or its alloys. A gasoline torch and a putty knife is the only equipment necessary.

Lo-Temp is not intended as a substitute for welding.

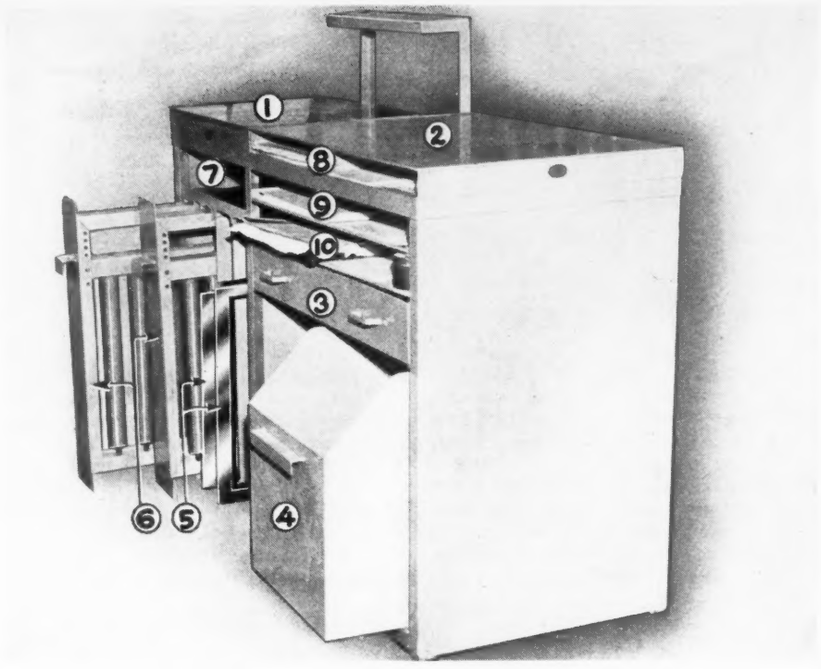
Your inquiry will be forwarded to The John Hewson Co. by *Printing Equipment Engineer*.

Graphic Arts School Opens

Backed by over 900 firms in a six-state area through Graphic Arts Industry, Inc., Graphic Arts Technical School began day and evening classes on October 4 at 1104 Currie Ave., Minneapolis 3, Minn. Courses offered include hand composition and Monotype keyboard and caster operations and maintenance, advanced and elementary estimating, cost accounting, layout and design, creative printing salesmanship and orientation for junior executives. Future courses will be offset platemaking and presswork, bindery work, Linotype-Intertype operation and letterpress presswork.

The new school is set up on the premise that the printing industry is now made up of workers who are specialists in a scientific industry, and not all-around craft workers in an artistic endeavor, according to R. Randolph Karch, Director of Education for Graphic Arts Industry, Inc., in Minneapolis, Minn. The school believes that time as an element in Graphic Arts education is not as significant as generally believed. It does not believe that a standard chronology can be sensibly set up for all individuals in learning Graphic Arts skills. It does believe that provision must be made for obvious individual capacities to absorb and assimilate instruction, and recognizes individual differences in persons based on previous schooling or experience, aptitudes and interest in the work.

Students are selected with or without schooling or experience in printing. No discrimination is shown with regard to locality of residence, age, sex, race or creed.



Pressman's Organizing Table

IN A recent issue of *Printing Equipment Engineer* a Pressman's Organizing Table was mentioned in the article descriptive of The Arizona Printers, Phoenix, Ariz. The table was designed by Robert Royden Greer, Los Angeles printing engineer. This organizing table is used chiefly in the Miehle Vertical and platen press departments of commercial printing plants.

Since publication of that article, we have obtained a photograph of one of the organizing tables in use in the plant of the Hollywood (Calif.) *Citizen-News* commercial printing plant. The table is shown in the accompanying illustration. These tables are placed alongside or behind the presses.

The top surface of the table measures 25 in. by 60 in. by desired height, which in some plants is 30 in. At *1* (far end of the table) is a steel imposing surface 1¼ in. thick and measuring 19 in. by 25 in. Back of the imposing slab is a well (not shown) to hold quoins, key, mallet and planer. Directly above the imposing surface is a steel tray the same size as the well (6 in. by 25 in.).

To the right of the imposing surface *1* is a steel top *2* which is made from 12 ga. metal and is the same height as the steel imposing slab.

Under the steel slab *1* is an open compartment 7, 6 in. by 25 in. by 25 in. This compartment is designed to hold loose wipers, or can be used for proofs, cans of ink, or other materials.

This steel tray may be used for holding benzine can, oil can, ink can with knife, etc.

At *6* are shown two vertical, slidable and adjustable steel racks for holding eight press rollers each. At *5* are shown two chases; these open compartments are designed to hold two locked-up forms, so the pressman will know what the next forms are that will be put on the press; he can look them over and prepare any makeready work in order to get a faster start after the job he is running has been finished.

Under the steel work top *2* are several divided compartments. Compartments *8* are designed to hold tissue and French folio. Below at *9* is a compartment to hold press packing sheets; compartment *10* is designed to hold prepared top sheets.

At *3* is shown a drawer (36 in. wide) with 12 compartments of various sizes in which are stored press parts, tools, gauges, etc.

At *4* is shown a steel safety wiper can; in the compartment immediately at the left space is provided for a steel waste paper box (not shown).

Mr. Greer states that this table conserves wasted hours by permitting the pressman to do his work with the least possible effort and with minimum resistance to lost motion. Being considered "the pressman's property," he takes greater interest in his work.

Record Expansion and Modernization

THE greatest expansion and modernization program since 1929 is now under way throughout the nation's newspaper and printing industry as harassed publishers turn to the methods of mass production industry to offset rising costs with more efficient machinery and methods.

With the U.S. public devouring daily newspapers at the rate of 2,114,000 per hour around the clock and newspaper advertising revenues expected to total $1,100,000,000 this year, substantial numbers of the country's 12,000 publishers are bidding this year for new printing equipment at a rate almost double that of 1929 in order to keep pace with improved processes and techniques in the Graphic Arts.

More than $170,000,000 alone is being spent this year on new printing equipment, according to William L. Batt, president of SKF Industries, Inc., who said printing presses now rival aircraft and intricate precision machine tools as prime users of anti-friction bearings.

Batt noted, however, that reports from printing machinery manufacturers indicate that deliveries of certain types of new equipment will remain critical for some time, due to continuing material shortages and the huge backlog of orders built up during the four war years when press manufacture was halted.

"The new and more efficient machinery and equipment now being manufactured means that newspapers will be in a healthier position to play their important part in the big job of merchandising and selling that will be necessary, with the return of the buyer's market, to keep our economy on an even keel," Batt declared.

Printing equipment buyers, he stated, are laying emphasis on greater size of presses, speed, simpler controls, easier accessibility for maintenance, self-lubrication and fast drying inks. Meanwhile, designers are concentrating on improvements aimed at achieving maximum efficiency on presses geared to turn out as many as 60,000 newspapers per hour.

Some 180,000 presses—a 10 per cent increase over 1930—are now going full blast to meet the demands of increased readership, the SKF president pointed out.

Metron Tachometers

IN a recent bulletin, the Metron Instrument Co. announces several electric tachometers and tachometer heads for industrial use on paper calendars, air compressors, fans, paper processing, printing presses and pumps having rotating application range from 1 to 100 thousand r.p.m. Manufacturer says these indicators may be calibrated in any units and are unaffected by temperature, magnetic fields and vibration. A copy of the bulletin will be sent to you by the Metron Instrument Co. or *Printing Equipment Engineer* will gladly pass along your request.

ANPA

Research Committee

MEMBERSHIP of the Mechanical Research Committee of the American Newspaper Publishers Association is announced by President David W. Howe.

William Baumrucker, jr., New York *Daily News*, continues as Chairman. Other members are Ralph R. Cranmer, Williamsport (Pa.) *Grit*; R. E. Lent, Jersey City (N. J.) *Jersey Journal*; Capt. Charles H. Ruth, Washington D. C.) *Star* and J. J. Shea, Hearst Newspapers, New York, N. Y.

The research program is shaped from time to time on the recommendations of the Mechanical Research Committee to the Board of Directors. C. M. Flint is the Director of Research.

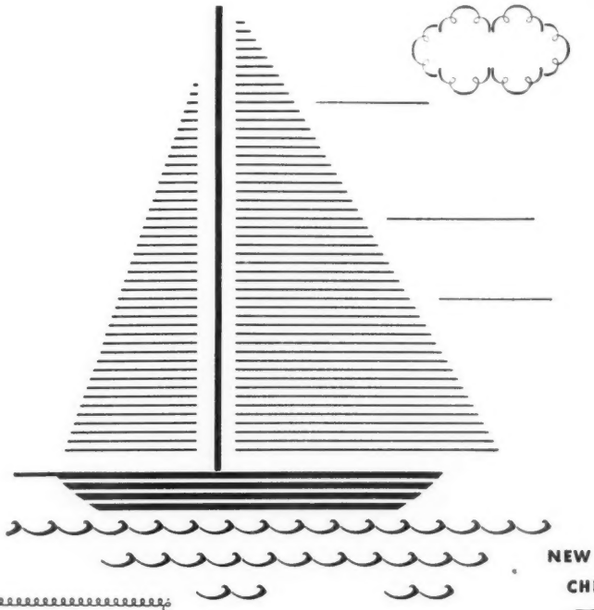
It is expected that the new research laboratory at Easton, Pa., will be in operation shortly.

Challenge Enlarges Plant—The Challenge Machinery Co. of Grand Haven, Mich. has purchased a three-story factory and office building. This structure, which faces the city's main thoroughfare and extends back a full block, will add 57 thousand sq. ft. to the company's present working area. J. Wesley Lee, Vice President of the company, said the purchase was made to improve working conditions for the 280 Challenge employees and to provide for expansion of departments. The Challenge plant (before this recent purchase) includes 100 thousand sq. ft. of floor space. Both the original and the new plants will be used in production.

Report Wins Award

In a presentation made this year by *Financial World*, The Champion Paper and Fibre Co., has been designated to receive the *Best of Industry* award for its current 30 page annual stockholder report. The cover drawing of this annual report depicts Champion's three-fold, interrelated operations at Hamilton, O.; Canton, N. C., and Houston, Tex. It is a four - color letterpress reproduction printed on 8½ in. by 11 in. cast coated paper. In addition to the financial report in the text a papermaking story of the Company's installations at its three mills is unfolded with the use of photographs. Champion was started 55 years ago as a small coating mill.

The high
quality of
Johnson Inks
will help you
breeze along—
fine work
at lower cost
—on every type of
printing job . . . the course we
charted 144 years ago.



CHARLES ENEU Johnson AND COMPANY
GOOD INKS SINCE 1804

10th and LOMBARD STS., Philadelphia, Pa.

NEW YORK
CHICAGO
BOSTON
ST. LOUIS
CLEVELAND
DETROIT
BALTIMORE
KANSAS CITY
PITTSBURGH
ATLANTA
DALLAS

Patents For The GRAPHIC ARTS FIELD

Covering patents issued July 27, August 3, August 10 and August 17.

All new patents for the Graphic Arts are reported exclusively for Printing Equipment Engineer by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issuing each week. Printing Equipment Engineer is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating

During the four weeks covered by this report, no patents have been issued for this heading.

Composing Room Equipment

During the four weeks covered by this report, no patents have been issued for this heading.

Feeding, Folding, and Delivery

During the four weeks covered by this report, no patents have been issued for this heading.

Plate Making

2,446,193. METHOD FOR PRODUCING HALF TONE RELIEF IMBIBITION MATRICES is especially useful in the field of color photography, but may also be used for reproducing original scenes, flat copy or photographic records. It reproduces directly the graduations of an original without the use of negatives or other intermediaries. The exposure of the original takes place in a conventional camera or projection printer including an arrangement for supplying uniformly distributed light flux to the original. A lens system projects the pattern of the original towards a screen placed before the printing emulsion. This screen separates the light flux into elementary beams of varying intensity determined by the shadow portions of each beam and representing a second pattern. The screen may consist of opaque dots in a transparent field, the spacing of the dots being varied according to the photographic gradations desired. The reproduction can be further controlled by varying the aperture which projects the image toward the screen and by changing the distances between lens and screen and emulsion and screen. After exposure the film or emulsion is developed and etched in a peroxide bath. The matrix thus obtained is soaked in a conventional acid bath for color imbibition transfer. Invented by Richard E. Rice, Waltham, Mass. Assigned to I. B. Corp., Cambridge, Mass. Application April 11, 1942. 3 claims.

2,446,476. APPARATUS FOR COATING CYLINDRICAL SURFACES provides light sensitive coatings on cylindrical printing surfaces of printing and photocomposing machines. The invention is adaptable to making comparatively heavy, gelatinous coatings or thinner coatings such as those used in making planographic printing surfaces. The coating material is poured on the front middle portion of the surface of the cylinder while it rotates about its axis and in an inclined plane. Coatings are said to be especially useful for use in printing by the electronographic process as invented by Huebner. The invention consists in pouring a coating material in liquid condition on the cylindrical surface while the surface is rotating about its own axis and is also simultaneously rotating, whirling or spinning in an inclined plane. The surface is preferably inclined upwardly and rearwardly from the vertical about an axis extending at an angle to the axis of the cylindrical surface. Invented by Willam C. Huebner, New York, N. Y. Unassigned. Application December 9, 1944. 7 claims.

2,446,858. STEREOTYPE PLATE-COOLING MACHINE. A stereotype plate making machine includes a cooling chamber having an inclined runway down which a plate can slide by gravity. A stop is movable to an extended posi-

. . . . for the best all 'round Engraving Service

You'll get metals to meet every engraving condition when you insist on this famous trio . . . Zomo Electric Zinc, A-Z Alloy and Zomag.

They're dependable metals. Zomo Electric Zinc and A-Z Alloy are melted and cast in the electric induction furnace for absolute uniformity.

And, they're provided with the tops in finished surface . . . the famous Machine-cut Finish that hugs any top, cold or hot.

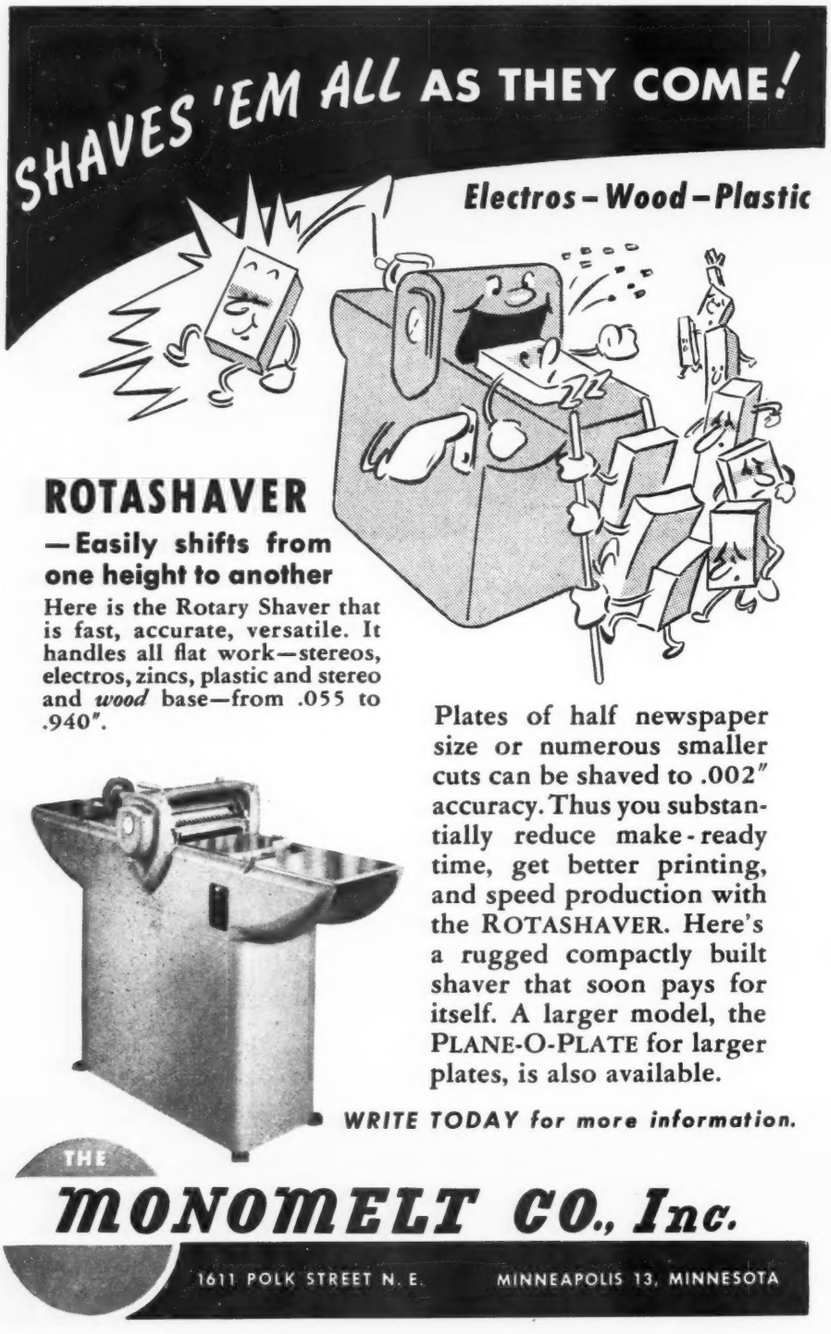
All three are protected with acid-resisting BACKOTE and surface sealing FACEKOTE at no extra charge.

Order all three from your regular metal supplier today.

ZOMO ELECTRIC ZINC ◆ A-Z ELECTRIC ALLOY

tion to arrest the movement of the plate within the chamber. Movement of plate into chamber opens a volume-control or flush valve. When a predetermined amount of cooling water has flowed through the valve, the stop is raised to its extended position. When valve automatically closes it releases water pressure on a spring-opposed piston pivotally connected to lower end of plate stop. Spring pushes piston and plate stop is thereby lowered. Invented by Paul L. Tollison, North Plainfield, and Charles L. Ricards, South Plainfield, N. J. Assigned to Wood Newspaper Machinery Corp., Plainfield, N. J. Application December 29, 1944. Divided and this application Dec. 6, 1946. 6 claims.

2,446,915. PHOTOGRAPHIC PROCESS OF PRODUCING A PRINTING IMAGE. A transparent backing plate is coated with an opaque lacquer, preferably black. An identification coating of colored lacquer is applied to the first coat of opaque lacquer. A coating of light-sensitive colloid is applied to the lacquer and then exposed to light rays under a master negative either by contact or by optical methods. Developing removes the colloid from the light affected areas over the lacquer. The lacquer is removed over the area where the colloid is removed by dissolving with a lacquer solvent and then the remaining colloid is removed with water. Several different types of materials can be printed by the printing plate which is adapted to applications where only a small number of reproductions are required, such as show cards and charts. Bichromate colloid coatings also may be used to produce prints or plates that may be run on offset presses. Invented by Philip G. Filmer, Pleasant Ridge, Mich. Assigned to General Motors Corp., Detroit, Mich. Application July 13, 1946. 3 claims.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Printing Inks and Related Chemicals

2,446,049. COPOLYMERS OF ISOPROPENYL TOLUENE AND ACRYLATE. A copolymer of the invention consists of a mixture of isopropenyl toluene and an acrylic compound selected from the group consisting of acrylic acid, methacrylic acid, methyl acrylate, and methyl methacrylate, the weight ratio being between 1:10 and 10:1. Suitable catalysts are benzoyl peroxide, stearic peroxide, oleic peroxide, terpene oxides, etc. Emulsifiers may be long chain quaternary ammonium compounds, sulfonated higher alcohols, sulfonated oils, wax acid soaps, alkaline caseins, lecithin, saponin, etc. Gum arabic is a suitable dispersant. Pigments may be present. Products are usuable in textile printing processes; emulsions thereof may be precipitated for coating paper, textiles and leather to render them water and grease proof. Invented by Edward L. Kropa, Old Greenwich, Conn. Assigned to American Cyanamid Co., New York, N. Y. Application February 13, 1943. 7 claims.

2,446,992. PROCESS FOR THE PRODUCTION OF PURE WHITE DISCHARGING EFFECTS ON CELLULOSIC MATERIALS dyed with dischargeable dyestuffs and treated with copper-containing agents is disclosed. It comprises applying to the materials a discharge composition containing a thickening agent and a sulfoxylate formaldehyde compound. The discharged areas of the materials are then treated with an agent yielding cyano ions. Invented by Charles Babey, Basel, Switzerland, and Frederick Leathley Goodall, Burley-in-Wharfedale, England. Assigned to J. R. Geigy A.-G., Basel, Switzerland. Application September 27, 1946, In Switzerland September 26, 1945. 7 claims.

2,447,064. PREPARATION OF ALUMINUM SALTS. Aluminum soaps are prepared by continuously contacting a stream of an aqueous solution of a salt of a fatty acid such as myristic, palmitic, capraic, stearic, ricinoleic, etc. and containing free alkali (the ratio of combined fatty acid to free alkali, on an NaOH basis, being above 20) with a stream of an aqueous solution of a water-soluble aluminum salt. The streams are mutually contacted at rates approximately equal to their stoichiometric proportions in the finished salt. A slurry containing a precipitated water-insoluble aluminum soap of the fatty acid is formed. A portion of slurry is continuously removed and slightly acidified to recover the aluminum soap. Products are usable in printing inks. Invented by Arthur Ira Gebhart, Union City, and John Ross, Ramsey, N. J. Assigned to Colgate-Palmolive-Peet Co., Jersey City, N. J. Application August 14, 1943, divided and this application September 7, 1946. 15 claims.

2,447,367. REACTION PRODUCT OF ROSIN-POLYHYDRIC ALCOHOL ESTERS AND PROCESS OF MAKING SAME. Drying oil varnishes, printing inks, and molding compositions are a few of the uses for the products of this invention. One soluble resinous composition claimed comprises the reaction product, at between 200 deg. and 300 deg. C., of a rosin polyhydric alcohol

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ester containing at least one free hydroxyl group, and a saturated polymer containing hydroxyl-reactive groups selected from the class consisting of carboxyl and carbalkoxy. It is obtained by polymerization of an alpha-unsaturated acid compound selected from the class consisting of alpha unsaturated carboxylic acids and esters thereof of monohydricalcohols volatile at the reaction temperature. Various fatty acids, benzoyl peroxide, and the like, may be used as resin modifiers. Invented by John B. Rust and William B. Canfield, Montclair, N. J. Assigned, by direct and mesne assignments, 50% to Montclair Research Corp., and 50% to Ellis-Foster Co., Corporations of N. J. Application October 7, 1944. 12 claims.

2,447,394. THE BARIUM LITHOL RED of this invention is suitable for use in printing inks, wall papers, paints, and the like. The process comprises coupling diazotized Tobias acid and beta-naphthol in a solution of 10% to 30% rosin soap and 4% to 12% of a 35% solution of an alkali lignin sulfonate. A solution of barium salt at a strike temperature of from 100 deg. to 170 deg. F. is added and temperature is increased from 3 to 5 degrees per minute to a conversion temperature of 40 deg. to 80 deg. above the strike temperature. Conversion temperature is held until reaction is completed and pH of reaction mixture is maintained at 7.6 to 10.5 throughout the process. The mixture is subjected to a medium agitation during heating and conversion steps. An extreme yellow shade of barium lithol red may be obtained by process of the invention. Invented by Clifton C. Candee, Bound Brook, N. J. Assigned to American Cyanamid Co., New York, N. Y. Application March 24, 1942. 3 claims.

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Imperial ZINC

Printing Presses and Equipment

2,446,010. MACHINE FOR STENCILLING A FABRIC includes a table with a perforated top on the lower side of which a vacuum is produced. A carrier is mounted for movement along rails attached to the two opposing sides of the table. A drum is rotatably mounted within the carrier, and pliable stencil is attached by its one end to the drum while the other end is attached to the table top. The drum is rotated in conformity with the movement in one direction of the carrier to unwind the stencil from the drum. A spring means rewinds the stencil on the drum during the return movement of the carrier. A color substance is applied to the stencil during its unwinding. Invented by Jens Simoni Jahn, Copenhagen, Denmark. Assigned to Aktieselskabet Brdrene Hartmann, Kanalvej, Kongens Lyngby, Denmark. Application September 13, 1938, in Denmark September 15, 1937. 6 claims.

2,446,690. SELF-LOCKING PAPER ROLL CHUCK. The chucks disclosed provide an inexpensive and practical means for chucking a paper roll, and one that can accommodate or grip sulphite cores, having the same consistency throughout and which, with simple replacement of certain segments, will accommodate sulphite cores having metallic ends. The chuck does not have to be changed in its entirety when changing from one core to the other. In each modification four segments are kept in their position on the hub of chuck by continuous coil springs. In one modification one of the segments has a tooth adapted to enter the keyway in the end of the metallic paper roll core, in the other the outer surfaces of segments are provided with a series of longitudinal parallel ribs adapted to bite into the sulphite paper roll core. Invented by Albert James Carpenter,, Jr., Battle Creek, Mich. Assigned, by mesne assignments, to Goss Printing Press Co., Chicago, Ill. Application March 15, 1944. 12 claims.

2,446,704. END CLIP ASSEMBLY is for clamping tubular stereotype plates on plate cylinders of printing presses and is an improvement over that disclosed in 2,350,585. It comprises a clip collar on a reduced portion underlying a beveled end of the plate and secured to the plate cylinder. Collar has a series of spaced longitudinally extending slots in its periphery having a pair of oppositely located, sidewise extending, recesses in the upper portion of the same and undercut enlargements adjacent their lower ends. There are slides in the respective slots, of cross-sectional shape, corresponding with those of the slots. Slides may be shifted in the slots. Plate clips in the slots are pivotally connected to inner ends of their related slides. Plate engaging lugs are adapted in one position to engage the beveled edge of the plate and in another position to be retracted within the slots and recesses. Clips have cam slots in their sides shaped to project the clips when shifted towards the plate and to retract the clips when shifted away from

the plate. Pins extend from the walls of the clip receiving slots and enter their related slots in the clips. The whole end clip assembly is readily operable for positive locking and unlocking of the plate merely by the use of a spanner wrench engaging two holes in a cam. Invented by Earl P. Lacure, Battle Creek, Mich. Assigned, by mesne assignments, to Goss Printing Press Co., Chicago, Ill. Application June 13, 1946. 16 claims.

2,447,090. THE ROTARY INTAGLIO INKING MECHANISM disclosed includes a guide on which a doctor blade carrier is mounted for reciprocation by means of a hydraulically operated piston attached to the carrier and is adapted to receive fluid under pressure on one side or the other to reciprocate the carrier. A pilot valve governs the application of fluid pressure to the piston. A cam operates on a moving part of the pilot valve and linkage between another moving part of the pilot valve is connected to the piston to cause the other moving part of the valve to follow the stroke of the piston in a predetermined proportion. Thus the pilot valve is operated to determine the rate of flow of fluid under pressure to the piston in a continuous accelerating and decelerating cycle whereby the cycle of movement of the doctor blade carrier follows a predetermined acceleration-deceleration pattern. Invented by Willard M. Pollock, Glen Ellyn, Ill. Assigned to The Goss Printing Press Co., Chicago, Ill. Application January 14, 1944. 6 claims.

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Munsey Bldg., Washington, D.C.

BOOKS

RECEIVED

Mechanism of the Linotype

MANY machinists, machinist-operators and just plain operators have acquired considerable technical operating knowledge of the Linotype through *The Mechanism of the Linotype*, originally written by John S. Thompson many years ago. The book has passed through many editions in order to keep up with improvements made in the Linotype from time to time.

The latest edition (the thirteenth) has recently been published. It has been revised and amplified by Oscar R. Abel and Windsor A. Straw. While adding information about late improvements in the machines, the collaborators have retained Thompson's original informal and chatty style. This consists of a machinist who has undertaken to instruct an operator in the mechanism of the Linotype.

The operator who wishes to learn something about the care and adjustment of the machine without getting involved in too technical procedures should find this book of great value, particularly the fellow who must conquer machine difficulties all by himself.

The only critical comment we might make about the volume is that we believe it would have been better if the revisers had added more specific information about setting the trimming knives. In general, however, no one learning about the machine from this book will receive false information. Its value has been proved by the fact that it is employed in many schools for teaching purposes.

The Mechanism of the Linotype—By John S. Thompson; revised and amplified to include late improvements by Oscar R. Abel and Windsor A. Straw. Size, 4½ in. by approx. 6¾ in.; 238 pages; semi-flexible black fabrikoid cover, with gold stamping on front cover, round corners, red edges; many illustrations. Price $5.15 per copy postpaid. May be ordered through *Printing Equipment Engineer*.

An Introduction to Color

A DESCRIPTIVE and non-mathematical book on color, intended for all persons interested in the subject—including photographers, designers, artists, engravers, and others—has recently been put on the market. The book, *An Introduction to Color*, by Ralph M. Evans, Superintendent of Color

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TODAY
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OF TOMORROW

● Your ideal composing room is within easy reach provided you work your ideas into a definite, organized plan.

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Quality Control at Eastman Kodak Co., is, as its name implies, an "introduction" to the subject of color.

Color, according to the author, sprawls across the enormous subjects of physics, physiology, and psychology. However, the book has been written on the assumption that the reader has little or no knowledge of these three subjects, nor of more than high school mathematics. The text is set forth in understandable terminology—profusely illustrated with explanatory graphs and charts and full page color plates.

The author in *An Introduction to Color* approaches the subject from the three above-mentioned angles and then discusses the interrelationship of each.

The type of material covered is indicated by some of the chapter headings—*Color and Light*, *The Physical Nature of Light*, *The Physics of Everyday Color*, *The Visual Variables of Color*, *Color Perception*, *The Measurement of Color*, *Effects of Illuminants*, *Color in Photography*, *Color in Art*, and *Design and Abstraction*.

An Introduction to Color is available through all Kodak dealers at $6 per copy.

Layouts for Imposition

LAYOUT for Imposition is a 200-page book issued by the United States Government Printing Office containing flat-bed, rotary and web press impositions. The layouts all present the arrangement of type or plates lying on the imposing stone or press.

Though parts of this book covering web press imposition will not be applicable to some printers, it does have a great deal of basic information for the printer who owns or has access to folding equipment.

The impositions selected in this book are designed to meet the production problems in the United States Government Printing Office, but are also adapted to the commercial plant using Cleveland, Dexter, and Quad models of folding machines.

A Signature Size Chart is available within the book besides the series of face-up imposition lays for the flat-bed, rotary, and web presses. It does not contain every possible folding imposition—only those most frequently used. A chart showing Sheet Proportions for greatest accuracy and production on folding machines is also contained in *Layouts for Imposition*.

Layouts for Imposition—This 8⅛ in. by 10⅝ in. book has a 1 in. black plastic comb binding with a crash finish, dark red cover and gold stamped lettering. The price is $2.25 which covers only the cost of paper, presswork, binding, and handling. It is obtainable from the Superintendent of Documents, Washington 25, D. C.

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NEW EQUIPMENT

Installations

Installs Goss Headliner

THE Long Beach (Calif.) *Press-Telegram*, according to the Goss Printing Press Co., is being printed faster than 50,000 copies per hour on a new seven-unit Goss Multi-color Headliner press. The installation of the 325 T., three-story press is one phase of an expansion program which includes a four-story addition to the *Press-Telegram* building.

The equipment is comprised of seven Headliner units, four half decks, and two pairs of Uni-flow folders. The press, claims manufacturer, will print a 56 page paper at its top speed of 60,000 per hour. Editions of 56 to 112 pages can be delivered at half speed. Color printing with continuous ink feed provides three separate colors and black, plus the combinations available from those colors. Goss Colortrol provides remote regulation of ink flow in fountains of the reversible color decks. Goss portable color fountains provide quick switch from black to color.

The press will operate on 360 h.p. and when loaded to capacity will require 19 T. of newsprint. It is 70 ft. long, 10½ ft. wide, and 15½ ft. high from the pressroom floor. The seven units and upper half decks are mounted on a basement substructure which houses the paper rolls, reels and tensions. The complete press, with units factory-assembled intact, required nine railroad cars for shipment from Chicago.

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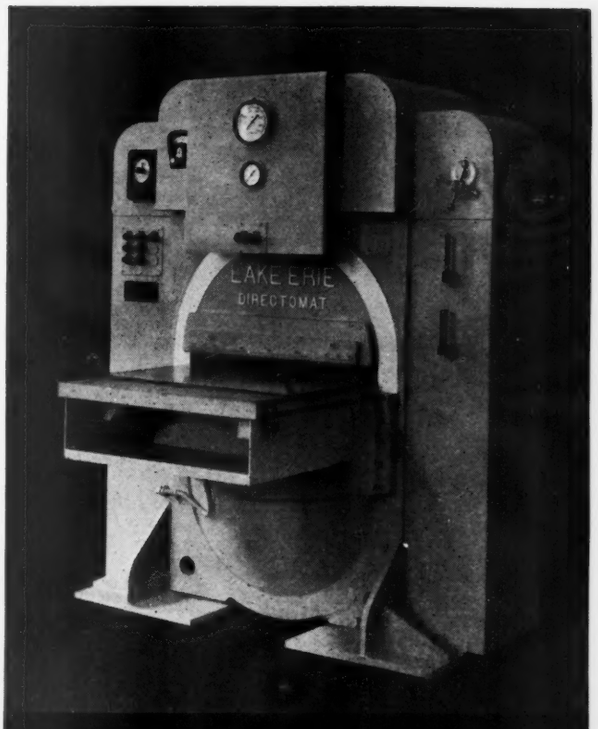

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Leading manufacturer of hydraulic presses—all sizes and types—stereotyping...plastics molding...processing...rubber vulcanizing ...metal working...forging...metal extrusion...special purpose.

Safety factors in the installation include special controls and full enclosure of moving parts. While there is a remote control electrical board, there are also control stations at many different places on the press where pressmen can regulate the speed. Goss tension-plate lockup is provided.

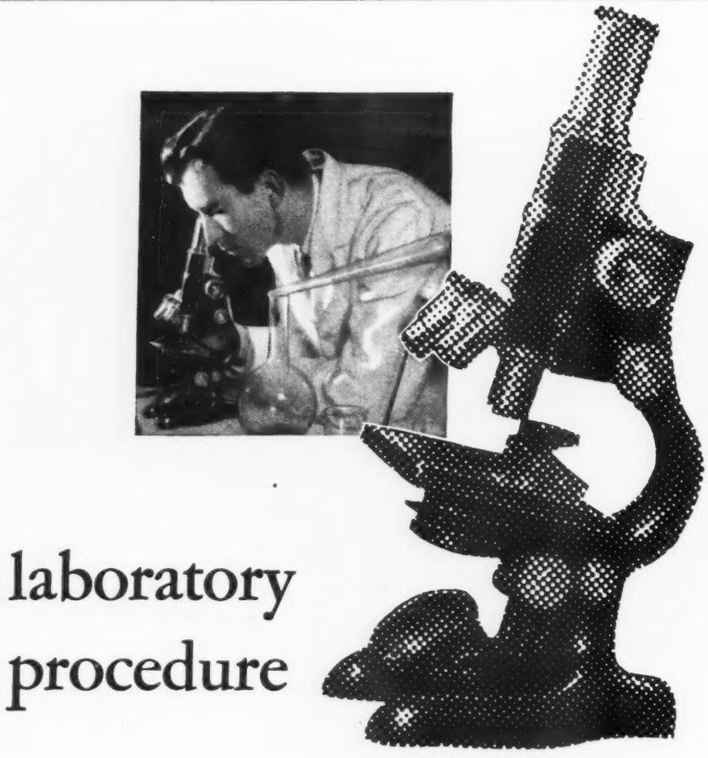
Installation of the press was supervised by Fred Bauer and Cleo Delong, Goss erectors; N. J. Feinen, Goss field superintendent, and Walter Chase, engineer.

Newspapers Buy Presses

Three East Coast newspapers are among the recent purchasers of Goss presses. The Holyoke (Mass.) *Transcript-Telegram* bought a Goss Headliner consisting of four multi-color units and Uni-flow folder. The Wilmington (Del.) *Journal-Every Evening* and *Morning News* ordered an eight-unit Headliner multi-color press with two Uni-flow folders. These new presses are claimed to have a top speed of 60,000 papers per hour. The Norwich (Conn.) *Bulletin Record* has purchased a Goss Duplex twin Unitubular 32-page-capacity press with tension lock-up cylinders.

Arrow Printing Co. Moves

The Arrow Printing Co., 35 Dolores St., San Francisco 3, Calif., is the correct address for that firm. The move was effective August 20. Telephone is UNderhill 1-0108.



laboratory procedure

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FREEPORT, ILLINOIS

DRIVING PINION REMOVAL

By RUSSELL CALKINS, Chief Machinist, Lima (O.) *News*.

THE following method for removal of a frozen driving shaft pinion from an Intertype or Linotype machine has been employed many times by the writer. The pinion shank which fits in the hollow end of the driving shaft is likely to become more or less corroded in time if not oiled occasionally. This frozen condition creates quite a problem in removing a worn pinion.

When necessary to replace a pinion, drive out the pinion collar tapered pin (C-98). Saturate all parts with penetrating oil. Then allow the machine to resume normal operation until the various stresses in normal machine operation cycle breaks the pinion shank and the driving shaft apart. After this occurs, the pinion can be easily removed, the parts cleaned and a new pinion put in place.

If the time element does not permit unfreezing a pinion by the above method, apply heat with a blow torch to the shaft at the end where the pinion shank is inserted. The flame will expand the sleeve section of the shaft and will expedite the loosening process provided the machine is operated in normal manner to supply the necessary breaking stresses.

In a few stubborn cases, it may be necessary to resort to the old hack saw method of cutting the pinion shank. Generally, however, either of the two methods described above will induce separation of pinion shank and driving shaft.

Average Under 10%

Citing steadily rising manufacturing costs, SKF Industries, Inc., announces that it increased prices, effective October 1, on most of the company's products. While the price changes will not be uniform over the wide range of anti-friction bearings produced by the company, the increases will average less than 10 per cent, R. R. Zisette, general sales manager, explained. "These changes are barely sufficient to cover the increases in cost which we are experiencing from day to day," the SKF official said. Price increases will also apply to steel, bronze, stainless steel, and monel metal balls.

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Saws 7 Inches of Slugs

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NO. 2
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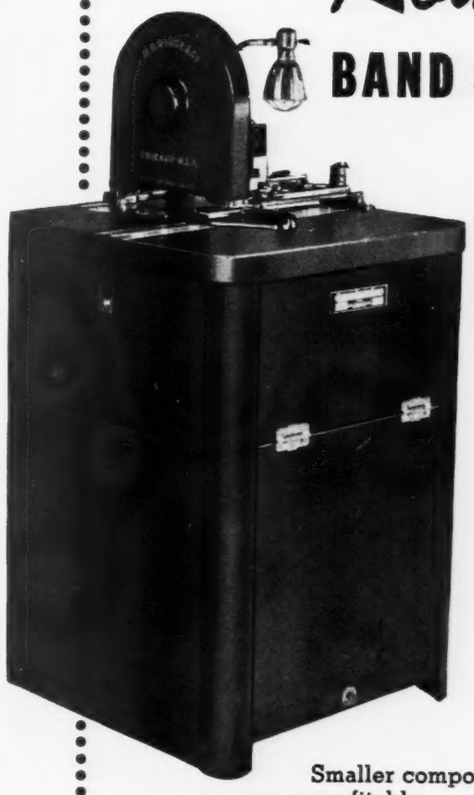

Smaller composing rooms can profitably use this Rouse Band Saw for fast, low-cost cutting of sluglines to variable lengths. Length selection is automatic . . . No gauge setting is required — no clamping or measuring. Cutting speed is uniform. Feed is mechanical. Rouse Band Saws eliminate time-wasting cutting of a few slugs at a time — for a variety of measures — to fit run-arounds and frequent changes of length. Heavy, sturdy construction assures lasting accuracy.

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Strictly a Graphic Arts Project

GRAPHIC Arts executives, as a group, always have been generous in their response to appeals for worthy objectives. They have been noted for their response to additional appeals when it might seem they are already carrying as many welfare contributions as their incomes permit. It is for this reason that we wish to supplement the appeal made in the page advertisement (August issue of P-Double-E and other Graphic Arts magazines) with respect to relief for printers and lithographers in 15 European nations who have been caught in the war's aftermath.

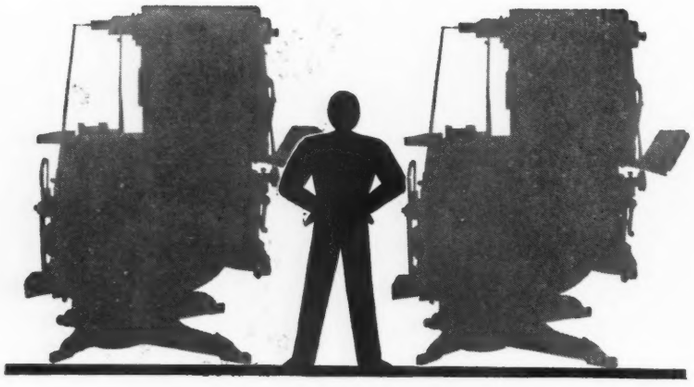
The relief work in the United States is being handled by the Printers' and Lithographers' International Relief Committee, of which Lee Augustine, Vice President of Printing Machinery Co., Cincinnati, Ohio, is chairman. Associated with Mr. Augustine on the Committee are the following well known Graphic Arts executives:

Donald L. Boyd, Huntington, W. Va.; John M. Callahan, Cincinnati, O.; Hon. John J. Deviny, Washington, D. C.; Alex Dittler, Atlanta, Ga.; A. E. Giegengack, New York, N. Y.; Clarence A. Groettum, Minneapolis, Minn.; Fred W. Hoch, New York, N. Y.; Gordon J. Holmquist, Los Angeles, Calif.; Frank McCaffrey, Seattle, Wash.; L. A. Neumann, Chicago, Ill.; A. G. Ruiter, Boston, Mass.; A. R. Tommasini, Berkeley, Calif.; Perry R. Long, Los Angeles, Calif.

In order to participate in this worthy objective, make your check payable to CARE for $10 or any multiple thereof; attach your letterhead or business card, and send to Printers' and Lithographers' International Relief Committee, P. O. Box 1422, Cincinnati, O.

The Committee, in turn, will send the checks to CARE, which will select the names of needy printers and lithographers abroad and guarantees delivery of packages made up by CARE. CARE will acknowledge receipt of checks. When packages are delivered in Europe, a receipt will be signed by the recipient of each package. All donations made in this manner are deductible from federal income tax.

How to make the most of AVAILABLE MANPOWER



Whether you're a book, magazine or newspaper publisher, the chances are you have a shortage of skilled manpower. Here's a way you can help overcome that shortage.

When you put Teletypesetter to work in your shop you'll find that each of your composing machines will turn out as much as 350 to 400 lines of straight matter per hour. And perhaps you'll share the experience of many users who have boosted their output *as much as 100%.* By feeding tape punched on the Teletypesetter Perforator into the Teletypesetter Operating Unit, composing machines can be run at top speed *automatically.*

Find out what Teletypesetter can do for you *today.* Write to:

TELETYPESETTER CORPORATION
1400 Wrightwood Ave., Chicago 14, Ill.

TELETYPESETTER
REG. U. S. PAT. OFFICE

Establishes Own Headquarters

Basil Parsons, Secretary and Sales Manager of Thomson-National Press Co. has announced the establishment of the company's own sales and service headquarters at 816 West Arthington St., in Chicago, on September 1, with L. A. Whittaker as Western Manager. Mr. Whittaker has been chief engineer at the factory in Franklin, Mass., for many years. He has designed new features for the company's presses and has been closely connected with the manufacture and assembly of the machines. Sales of all new or rebuilt Thomson diecutting, printing and embossing presses. General repairs and rebuilding will also be taken care of by the Chicago branch.

Carnegie Tech Adds Equipment

$50 thousand worth of new equipment has been loaned by the printing industry to the Printing Dept. of the Carnegie Institute of Technology it was recently stated. The new addition will bring the school's equipment total to approximately $500 thousand. Ultimately, the department will have its own engraving plant as well as facilities for bookbinding instruction.

The companies and the equipment they have given are: the Harris-Seybold Co., 17 by 22 Harris offset press and a heavy duty paper cutter; Taylor Machine Co., Taylor Registerscope; United American Metals Corp'n; Dumperin Big Chief Remelting Furnace; Miehle Printing Press & Mfg. Co., a V-50 Vertical press and a Miehle horizontal press, and the Hamilton Mfg. Co., steel type cabinets.

The Challenge Machinery Co. and American Type Founders are giving proof presses and an automatic cylinder press with drying unit, spray and static eliminator. Carnegie has obtained a Harris-Webendorfer offset press, a Sheridan cutter, and a Monotype caster and keyboard from the War Assets Administration. Plans are underway for the installation in the near future of a Teletypesetter in addition to other printing units.

Find The Pressman Who DOESN'T Use

VULCAN Offset Blankets

There are plenty of sound reasons why VULCAN Newspaper Press Blankets are the preferred cylinder packing with a majority of pressmen who print the world's leading newspapers.

VULCAN Press Blankets have greater firmness, the correct degree of compressibility, increased resistance to wear and abrasion. These finer blankets are noted also for their precise uniformity of thickness. There is no ghosting, no bolstering, better second impression. You will enjoy the advantage of longer press runs with a minimum of effort.

There is a combination of VULCAN cylinder packing for every type of press, old or new, and every operating condition. Let us give you YOUR combination for a better-looking paper.

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Pacific Coast Representative: THE CALIFORNIA INK COMPANY, INC
Canadian Representative: SEARS LIMITED, TORONTO

Seven years ago . . . this *IMPROVED* STAR SPACEBAND

was first introduced to the trade.

It has never before been advertised in trade publications, because from the beginning, demand far exceeded supply. Now greatly expanded production has at last permitted us to announce the availability of all thicknesses of this superior Spaceband, for immediate delivery.

Most men who have to do with linecasting machines know about this 'new' STAR Spaceband. If you are not one of these, you'll be interested in the illustrated folder describing the details of construction which make this band best.

Write nearest branch or agency

ACE (ENDLESS) ROUND **ASSEMBLER DRIVE BELTS** ARE GOOD FOR YEARS OF WEAR

PRECISION
TRADE ★ MARK

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Factory and Main Office:
SOUTH HACKENSACK, N. J.
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CHICAGO • MINNEAPOLIS • DENVER

Truck Users Increase

The paper and printing industries bought nearly three times as many storage battery-powered industrial trucks in 1947 as their average annual purchases in 1935-9, recent studies by The Electric Industrial Truck Association show.

In a report issued by the association, it is shown further that the number of users of electric trucks in the paper and printing industries has also risen sharply since 1944. The report indicates that there are 40 percent more users now than four years ago. This increase is attributed by observers to the awareness among executives in the industry of the advantages of machine-size unit-load handling of paper rolls, packaged paper, etc.

Movie Has Premiere

THE new IPI color movie, *Rainbows to Order* had its premiere at the Hotel New Yorker on September 20th. The film conducts its audience through the Research Laboratories of IPI and the fundamental Research Laboratories of Interchemical Corporation as it unfolds the story of research, materials, factory control and manufacturing operations which are back of today's printing ink. It shows that printing and color reproduction have come a long way since Gutenberg made his first experiment with movable type. *Rainbows to Order* will be available for showings to printing production groups, advertising clubs, publishing associations, etc.

RUBBER BLANKET SURVEY TO BENEFIT INDUSTRY

(Abstracted from Address, *LTF Moves Ahead*, by Don H. Black at the National Association of Photo-Lithographers Convention, Cincinnati, September 1948)

IN cooperation with the rubber blanket industry, LTF is conducting a survey to grade blankets by means of "use requirement tests," for (1) Stretch, (2) Firmness, (3) Resilience, (4) Oil Absorption, (5) Serviceability, with special relation to present day synthetic and heat drying inks. Sixteen to nineteen domestic blankets are represented in the survey. Previous research along this line has resulted in more than a 200% increase in the average life of blankets at a tremendous saving to the industry.

Help Make Machinery Foolproof

Instructions are soon forgotten—maintenance pamphlets lost, as the Army and Navy discovered during the war. Manufacturers have learned a valuable lesson from the armed services, according to E. Blake of the American Name Plate Co. Metal instruction plates and panels are an invaluable aid in informing users what can, and what cannot be done with a piece of machinery—or in allocating responsibility for mistreatment.

Some suggestions to manufacturers volunteered by Mr. Blake are: (1) Attach instruction plates where they can be easily seen by everyone who operates the machine, because no one will go out of his way to look for instructions.

(2) Put them where they are easy to keep clean and legible—and make it a rule to keep them that way.

(3) Use great care in writing instructions. Keep the text simple and nontechnical. Wherever possible give the instructions in legend form cross-indexed (by letters or numerals) for reference to the accompanying diagram.

(4) When in doubt, use duplicate instruction plates.

(5) Grease fittings, inspection points, etc. should be marked with identification plates giving clear concise instructions as to procedure, type of grease, etc., to be used.

(6) Select the instruction plate according to the type of equipment on which it will be used. For instance, salt water corrodes all but a few metals; chemical fumes, oil, water, etc. will corrode some metals, have little effect on others. Consult the manufacturer.

(7) Do not place instruction plates near exhausts, etc. They will not be kept clean in such difficult places.

(8) Select stock designs when buying. They can be made much cheaper; serve just as well.

Thinking about building?

We have 30 years experience on Engineering and Architecture of newspaper and printing plants available to those considering a building program. A discussion of your problems entails no obligation.

MORTON L. PEREIRA & ASSOCIATES

100 West Monroe Building Cleveland 3, Ohio

The Royle Router

- A large table mounted on a rigidly constructed column.
- Convenient alignment and tightening of driving belts.
- Running parts designed to reduce vibration.
- Sufficient speed at cutter edge to route fine or rough out without reducing speed.
- Precisely fulcrumed elevating mechanism assures immediate reaction to pressure on the foot pedal.
- Changing cutter heads a matter of seconds.
- Speed and balance are built into Royle Routers.

JOHN ROYLE & SONS

Established 1855

10 Essex Street Paterson 3, N. J.

Easy as Typing!

"TYPEWRITE" your line-cast machine composition

with the KELLOGG *Type-O-Writer* (Reg. U. S. Pat. Off.)

KEYBOARD*

If you're looking for a way to make line-cast composing easier, less exacting and more accurate, the Kellogg Type-O-Writer Keyboard is made for you. It actually makes line-cast composing as easy as typewriting!

The Type-O-Writer uses the standard typewriter key arrangement. It reduces the number of keys the operator must use from 90 to 44. At the same time, it allows him full use of both hands across the entire face of the keyboard . . . alphabet, figures and symbols, lower case, caps and small caps. The result is cleaner work, fewer slugs that have to be re-cast, less operator fatigue.

Write today for new bulletin just off the press.

*Fully covered by U. S. Patents

HOW TYPE-O-WRITER WORKS

Solenoid operated plungers in the Type-O-Writer Keyboard locate directly over composing machine keyboard. A single key on the Type-O-Writer operates three keys on the composing machine—lower case, cap or small cap. You shift for caps just as on a typewriter. Colored lights indicate what is being set.

Type-O-Writer is simply installed with only a screw driver. It may be moved from machine to machine as easily as moving a typewriter from desk to desk.

See the Kellogg Type-O-Writer on display at the 62nd National Convention of the Printing Industry of America, Inc., Edgewater Beach Hotel, Chicago Ill., October 20-23.

KELLOGG SWITCHBOARD AND SUPPLY COMPANY

6650 South Cicero Avenue, Chicago 38, Illinois

Wash Drawings Reproduced By Lines Instead of Screen

THE reproduction of wash drawings in the standard manner by means of the usual halftone screen is given a different twist by John H. Lee, Production Manager of the Kansas City (Mo.) *Star* and *Times*. The method will be of interest to those not too familiar with the photo-engraving process. In this method, the wash drawings are reproduced by means of a series of shaded lines. No skill other than that required to reproduce a wash drawing by the standard line screen method is needed. Instead of using the cross lines of the standard screen, only the lines running in one direction are used.

The method of producing this effect, for, in reality, the lines do furnish a new effect, is most simple. All that is required in addition to the requirements of regular standard halftone reproduction of wash drawings are two straight line stops which are made of regular artist's white bristol board. These stops measure 2½ in. wide by 6 in. long with one end rounded. In the rounded end of each there is cut with a pocket knife a slit, in one case the slit is 1½ in. by ⅛ in., while in the other the slit measures 1 in. by 3/16 in. Preferably the stops may be blackened with India Ink or cut from black cardboard to eliminate light reflection.

These two illustrations were photo-engraved on zinc from wash drawings by a method employed by John H. Lee and photo-engraving staff in the Kansas City (Mo.) *Star* and *Times*. Two straight line stops shown in the other illustration accompanying this article are used to eliminate the cross lines running in one direction in the photo-engraving screen, thus giving a different appearance to the "screened" areas in the illustrations.

In shooting the negative for these shaded line reproductions, the usual procedure is followed. The wash drawings are mounted on the camera copy board

More Production in the Bindery with NEW ATF Paper Joggers...

NOW . . . with a flick of a switch, get more production from your paper cutter, perforator, stitcher, folder and press. More economy for your bindery operations. Handle all kinds of stock from onionskin to heavy board and do it fast. • There is profit in time saved with the NEW ATF Paper Joggers. • Styles to fit most sizes of paper stock.

Vertical action jogger with 28x40-inch hardwood deck (table top) and all-metal cabinet. Entire mechanism enclosed with all controls located outside on convenient panel and foot switch. Height from floor to top of deck, 20 inches, enables operator to jog large sheets with ease.

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Considering New Press Equipment? . . .

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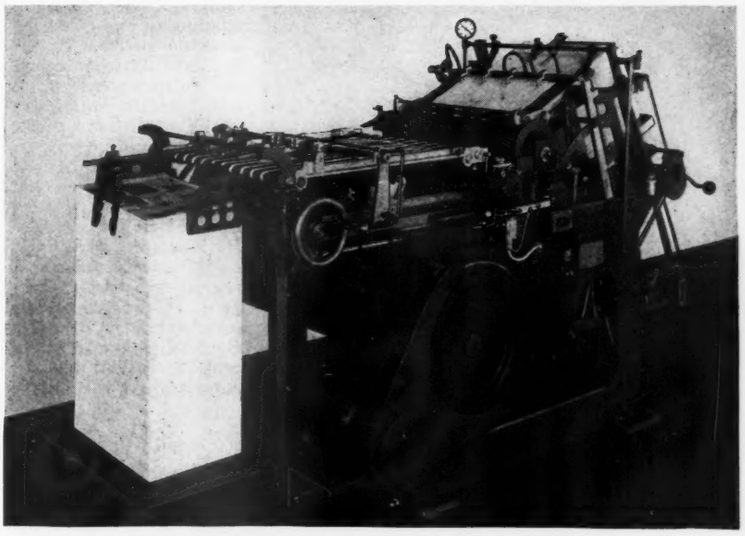
Write for New Descriptive, Illustrated Circular. . . .



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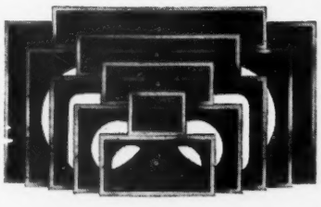

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●Durable, light, precision made furniture for filling large spaces in book or color work. Dresses out a large chase quickly. 70 sizes—15 x 15 to 60 x 120 picas.

Challenge Labor-Saving Iron Furniture

●Made of a specially selected mixture of close-grained iron, precision machined on all sides and edges and finished to absolute point measures. *"Velvet Edges"* assure easy handling—no danger of cuts or scratches . . . no sharp corners to get dented or chipped. Ribbed for strength and light weight and to provide an ample finger hold when lifting from the form. Large raised figures on both sides of each piece show the pica size at a glance. Holes allow for drainage. 120 standard sizes—2 x 4 to 10 x 70 ems pica. Write for data and prices today!

Challenge

THE CHALLENGE MACHINERY COMPANY, GRAND HAVEN. MICHIGAN

DEALERS IN ALL PRINCIPAL CITIES

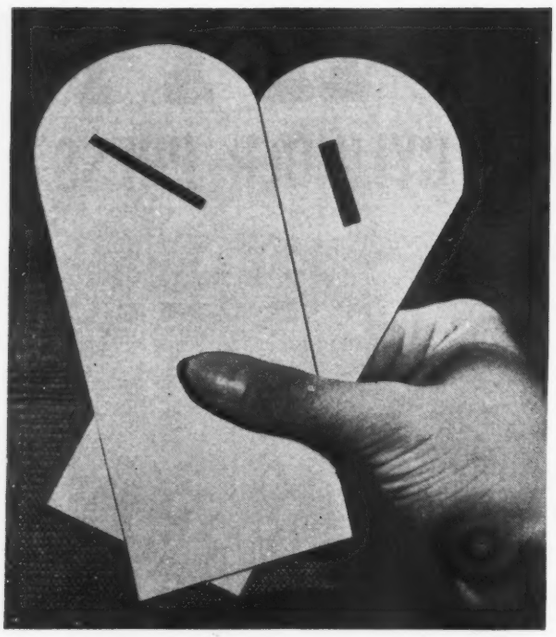


Photo - engraving straight line stops such as are used in the photo-engraving department of the Kansas City (Mo.) *Star* and *Times*, are cut from regular artist's bristol board approx. 0.014 in. thick. Preferably, they should be blackened to eliminate light reflection. They are used to eliminate the cross lines running in one direction in a regular halftone screen to secure a different effect in the halftone areas when film is exposed to a wash drawing. The stops measure 2½ in. wide by 6 in. long from square bottom to top of rounded end. A slit is cut with a pocket knife in the rounded end of both stops. Both slits are positioned at a 45 deg. angle. In one stop the slit measures 1½ in. by ⅛ in. In the other, the slit measures 1 in. by 3/16 in. Both slits are positioned centrally on the axis of the curved top of the stop.

and the usual 65 line screen is in its usual place. The straight line stops made of white cardboard are inserted one at a time in the place where the flash stop usually goes. Two exposures are made, the first with the straight line stop with the longer and narrower slit in place. With the camera lens wide open, an exposure of about 1½ min. is given. This straight line stop is then removed and the other stop (the one with the shorter but wider slit) is inserted. A second exposure of about 15 sec. is given, also with the lens wide open. The use of a straight line stop in making each exposure acts as a diaphragm and reduces the lens opening and at the same time cuts out the cross lines in the standard screen, allowing the shot to be made with only lines running in a single direction.

The result of a shot made with these two straight line stops is a negative in which tone is reproduced by means of a series of parallel shaded lines and with no trace of the cross lines whatsoever.

The rest of the process used in producing a cut is the same as if a standard halftone cut had been made of the wash drawing. The effect is most pleasing and reproduces well in newspaper production.

This Idea Can Be Used By All Printing Plants

To enable suppliers better to evaluate its needs, the J. M. Huber Corp., New York, through its purchasing department, recently issued a 6¼ in. by 3¾ in., 12 page booklet for distribution by receptionists to salesmen at six Huber purchasing offices. Simply enough, it's called *Let's Get Acquainted.*

Let's Get Acquainted makes no effort to sell, but rather its mission is to inform. "Whether you're here to buy from us or sell to us, you are welcome," the story begins. "Perhaps while you are waiting to see your party, you would like to know a little about our company."

Huber printing inks, kaolin clay, carbon black, and oil and gas are next described and illustrated in terms of their end use in consumer products—breadwrappers, chinaware, newspapers, tires, telephones, insecticides, etc.

Copies may be obtained by writing to E. M. Krech, Director of Purchases, 620 - 62d St., Brooklyn 20, N. Y.

It's Piling up New Records

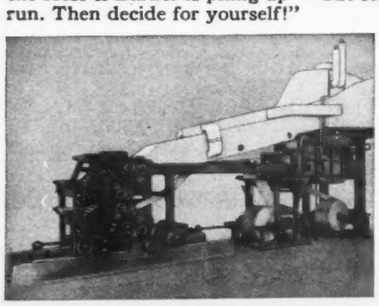
EVERY WEEK!

"Why, Bill, we didn't know a printing press like this existed! The Hess & Barker Rotary does work we used to think was out of the question.

"Lightning speeds on 4 and 6 color printing — printing and rewinding up to 1000 feet per minute! Or sheeting at the rate of 7500 sheets per hour! Perfect register at all speeds.

"Easiest make-ready of all time. Simply roll back the ink carriage and go to it — every part easily accessible, and ink distribution is perfect. Fountains are adjustable while press is in motion.

"I could rave on for hours telling you what new records the Hess & Barker is piling up — but stop in and watch it run. Then decide for yourself!"



Write for fully illustrated folder on the Hess & Barker Rotary Press today. It's a revelation to any printing plant.

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Simple, accurate, durable, trouble-free. Fewer moving parts assure low upkeep cost. Controlled heights within .001". Saves valuable make - ready and production time. Illustrated folder on request.

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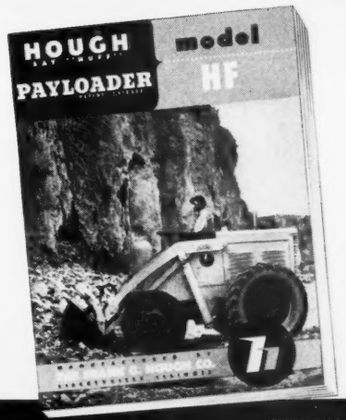
Above: cover of booklet Press, Milwaukee, Wis Libertyville, Ill.

Above: cover of booklet produced by The North American Press, Milwaukee, Wisc., for The Frank G. Hough Co., Libertyville, Ill.



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Road building machinery is out of our line . . . but the task of reproducing it in sharp, lifelike detail was accomplished with the aid of Cromwell *Special Prepared* Tympan. The hard, uniform surface, calipered uniformity and high tensile strength of Cromwell Tympan never varies. That's why The North American Press . . . yes, and printers the world over, rely upon it implicitly for the production of fine printed pieces. CROMWELL *Special Prepared* TYMPAN, as always, unconditionally guaranteed, has stamina that cannot be duplicated. Write today for FREE working sample, giving size or make of your press.

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"You'll never know until you try them"

There's only one possible way . . . and we mean only one . . . that you can determine the precision quality of BEVERIDGE Dry Mats and that is to try them. That's the way hundreds of satisfied BEVERIDGE users started. How about you?

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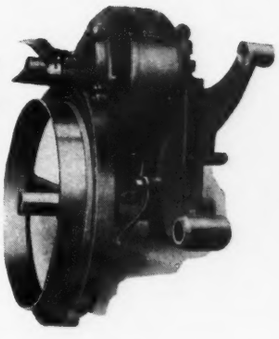
The ***QUICK-CHANGE*** feature of the

CUSHMAN *offset* MOTOR



is one important reason why so many prefer it.

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Proper Slant and Height for Make-Up

Adjustable Lead and Slug Rack will hold numerous sizes of material. Sufficient Room to Accommodate 2 men working together. Constructed of Heavy Gauge Prime Steel. Finished and Polished in Olive Green Baked Enamel.

No. A-4 Working Top
Complete with Adjustable Lead & Slug Rack **$49.50**
(Fits top of 4 tier "8¾x13" Galley Cabinet)

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Write for Catalog

Course in Ink and Paper

New York's University Division of General Education is offering during the fall term a course in *Printing Processes Ink and Paper*, it was announced by Dean Paul A. McGhee. The course will be conducted by Dr. Gerard Larocque of the New York *Daily News*. Lectures will center upon the fundamentals of letterpress, gravure and offset printing.

BETTER
FASTER
MORE PROFITABLE PRINTING
75,000 FOLDING CARTON BLANKS PER HOUR!
Send your production samples, let Champlain show you how to do the job — better, faster, more profitably.
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CHICAGO OFFICE: 7 W. Madison St., Chicago 2, Ill.
Rotogravure at its best
5171

After extensive plant remodeling of entire plant, the exterior of the building for the Monessen (Pa.) *Daily Independent* is of glass and black Albarene stone, with aluminum and stainless steel trim.

Modern Facilities In Small Plant

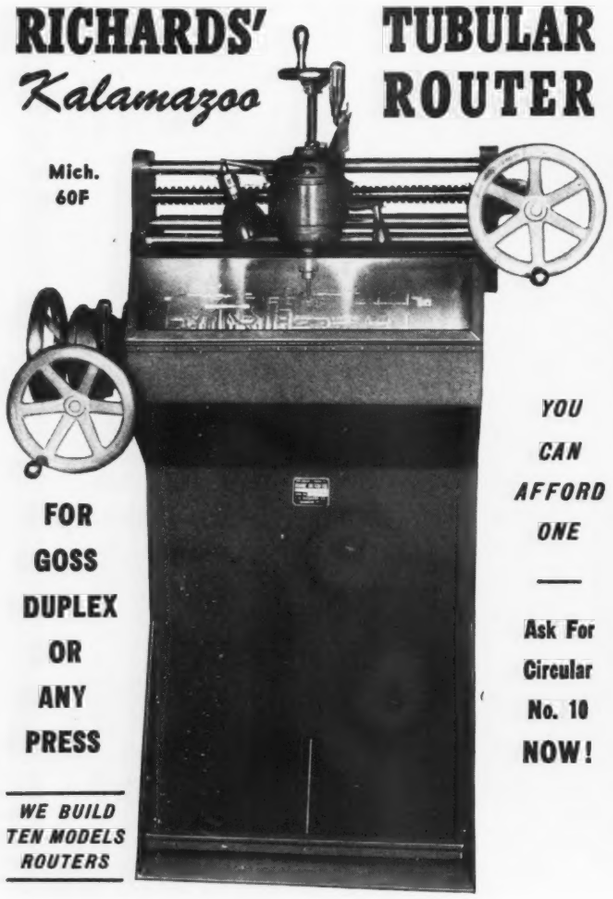
THE Monessen (Pa.) *Daily Independent* recently completed an extensive remodeling program, giving it enlarged office and shop space and a more efficient layout of equipment in both the newspaper composing room and the commercial printing plant.

Maximum utility together with comfort and safety of employes have been the governing requirements in shop arrangement and in the materials going into construction work.

Additional space approximately one-third of the total floor area was converted

RICHARDS' Kalamazoo TUBULAR ROUTER

Mich. 60F



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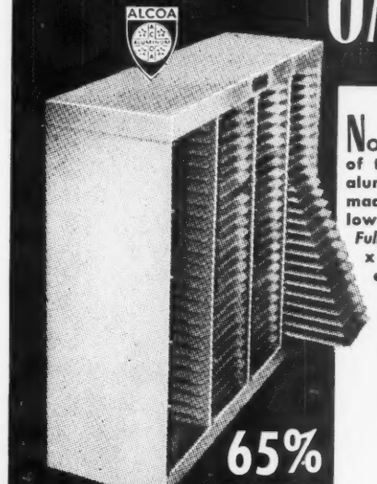

NOW you can have shipments of these amazingly sturdy, aluminum galleys and racks made within 48 hours, at the low prices listed below. *Full newspaper galleys, 18¾" x 23½"*, of Parkerized steel and completely rustproof. Order now—save money, save on rack and galley weight. You can't lose. Complete satisfaction guaranteed.*

65% LIGHTER

CHECK THESE FEATURES

- √ Standard thickness (.051 gauge) for proofing
- √ Low enough for tie-up
- √ Square sides for make-up
- √ Grooved sides, spot welded corners for rigidity
- √ Strong as steel—⅔ lighter
- √ Rustproof—Beveled Edge

COMPARE PRICES—48 HOUR SHIPMENT

SIZE	GALLEYS In Lots of 50	100	RACKS 100 CAPACITY
8¾" x 13"	59c ea.	55c ea.	$55.00
10" x 16"	75c ea.	69c ea.	69.00
12" x 18"+	95c ea.	89c ea.	75.00
10½" x 23½"	95c ea.	89c ea.	
8½" x 23½"	90c ea.	79c ea.	75.00
6¼" x 23½"	80c ea.	69c ea.	69.00
3½" x 23½"	70c ea.	65c ea.	

*Cold Rolled Steel

+ Full newspaper galleys (Parkerized steel) 18¾" x 23½", $4.50 ea.

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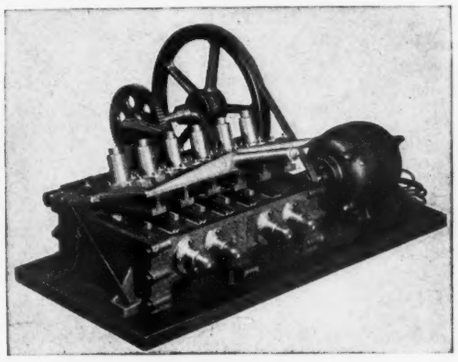

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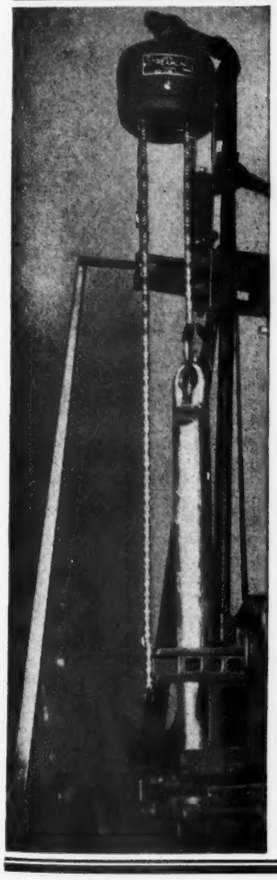

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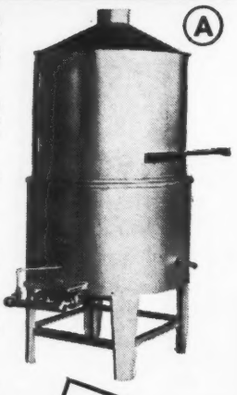

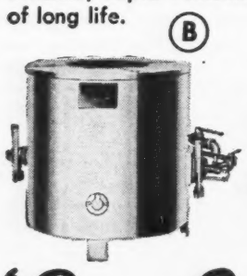

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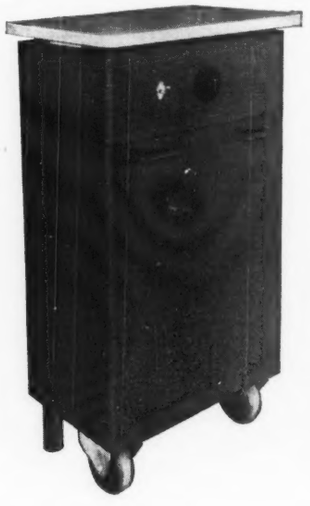

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Electric stereotype melting with G-E heaters gives faster, more uniform heat distribution through precise temperature regulation. This adds up to minimum surface dross, more and better castings.

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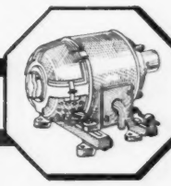

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Technical Discussions

(Continued from Page 28)

things do go wrong. He said a pressman should be given a color-test to make sure that he is not color-blind. He suggested that there were other factors to be determined such as nimble fingers dexterity in handling paper and a sense of design. He also suggested that such an executive must know what constitutes good printing; how to assume authority to get best results from his subordinates; how to train workers; how to maintain morale; how to handle situations as they come up, and how to put work through on time schedules.

"In your business you can't take a pressman up to a $20,000 press and say to him that you want to give him a couple of weeks to run it to see if you like his work," said Mr. Klein. "You might hire a stenographer on trial, but you do not hire a pressman like that. Instead of trying out a man on a press to find out how good he might be, you can try him out through a work sample — through an aptitude test.

"First find out what a job calls for and then measure the fitness of a man to do that job. What will the tests do for you? They will measure achievements. Achievement tests are designed to measure that which an individual has already learned either in school or by experience. Tests will measure emotional factors in a man's life—the capacity to get along with other people, the capacity to meet life's situations. Sometimes you want a man who is fast, when it comes to thinking; sometimes you want a man who is cautious, slow and deliberate; and still for other jobs you want a man who has a strong back only. In every department of your business, tests can be used profitably.

Says It's Lazy Thinking

Auston Kelly, director, National Employee Relation Institute, New York, in his presentation of *Present Day Trends in Employee Benefit Plans*, referred at length to welfare and pension provisions being considered in labor negotiations, and told of the trend toward governmental agencies reaching for control of such plans. He advised employers to study provisions and see to it that they do not sign contracts without considering all factors involved including income tax items. He accused management of lazy thinking when it yields to plans suggested by labor groups to handle all welfare items after management has provided money for them. He advised that plans to administer welfare funds should be the combined responsibility of both management and labor groups.

Job Control in Small Plant

Rex G. Howard, president, Howard Company, Peoria, Ill., in his address on *Job Control in the Small Plant*, remarked that labor efficiency will make or break a plant, and he suggested that inefficient persons should be removed, and efficient persons, rewarded. In his general suggestions concerning operation of a plant, he said that before a job is entered on the schedule consideration should be given to whether the work can be done with facilities available, and if not, it should not be undertaken. His advice to small operators was that it is better to do a $500 job and make a profit, than to undertake a $5000 job and suffer loss, or break even. He described how he uses estimating blanks with all items indicated to insure not making an error in figuring, and that his formal quotation to the prospective buyer includes everything. He also prints trade practices on his quotation sheet which becomes part of the contract.

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Estimates should be made in triplicate form—so he suggested one sheet go to the customer, the second to the sales department and the third to the files. If the job is entered as an order, plans for production provide that all items on the proposal blank are entered on the job ticket, so that extras may be properly noted and charged for. He also described his production control board, and methods by which he as the executive receives reports on production every week.

Arthur A. Wetzel, president, Wetzel Brothers, Milwaukee, in his talk on *Management's First Duty* suggested nine things which must be considered, namely: Profits, Costs, Records, Budget, Expenditures, Credits, Banking, Sales Management, and Delegation of Authority. He used charts as visual aids to the audience in following his points.

Another talk on management was given by John Williams, president, Williams and Marcus Co., Philadelphia. He used football stories and other anecdotes to illustrate his points, principally that a business like a football team, must have a goal, and organize its force to achieve its objective. He suggested a proposed policy in business which should be fair to competitors, suppliers, customers and employees.

How Trade Shop Helps Industry

How the trade shop making lithographic plates helps the industry constituted the talk given by Angelo Pustorino, vice president, Daniel Murphy & Co., New York. He referred to the service which is rendered by the trade shop which includes art and camera work and the making of plates, but does no presswork.

"With the installation of high speed multicolor presses such as are now being built, lithographers can look forward to bigger and more profitable color jobs," said Mr. Pustorino. "The preparation of this additional color work would present a production problem if it were not possible to utilize the services of the trade shops. Oftimes a trade shop gets a call to do a complicated job which some lithographer cannot handle in his own shop, involving an unusual number of strip-ins, and many hours of hand work on which an estimate might be a wild guess. The trade shop, however, takes the gamble on the estimated time necessary to produce the job and quotes a price. This is a definite advantage to the lithographer because he knows in advance how much his plates will cost him,

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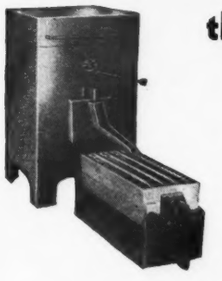
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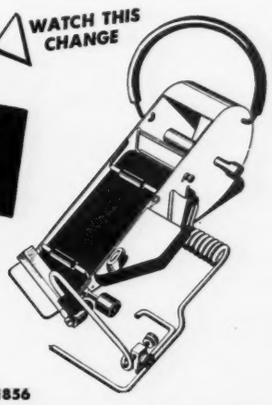
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TALI Organized

ORGANIZATION of the Technical Association of the Lithographic Industry was completed at Cincinnati, September 16, with the election of Michael H. Bruno, manager of research, LTF, Chicago, as president. Dr. M. C. Rogers, R. R. Donnelley & Sons Co., Chicago, was elected first vice president; Herbert R. Leedy, Harris-Seybold Co., Cleveland, second vice president, and George Wilhelm, Rand-McNally & Co., was elected secretary-treasurer. Besides officers who are also directors, two others were elected to the board, namely, Arthur Cornell, Forbes Litho Mfg. Co., Boston, and Frank Preucil, Gerlach-Barklow Co., Joliet, Ill.

Formation of the new technical research group was begun at a meeting last Spring of the Lithographic Technical Foundation research committee in Chicago. It was decided to include in its membership all scientific men engaged in the lithographic and associated activities as research men in the same relationship to the lithographic industry as the Technical Association of the Pulp and Paper Industry bears to the paper industry. It is the plan of the autonomous group to hold its meetings in connection with national conventions of the industry in the same manner as the meeting on September 16 was held in connection with the convention of the NAPL.

enabling him to include his regular profit."

Technical Panel

The final session of the convention was devoted to answering questions of inquirers, the attendance at this session being better than any other except that at which the new film of the Harris-Seybold Co. was presented. The technical panel consisted of Michael Bruno, manager, research department of Lithographic Technical Foundation; Professor Robert E. Reed, LTF consultant; Emmett Flaherty, I. S. Berlin Printing and Lithographing Co., Chicago; Albert Grunder, IPI; and Frank Preucil, Gerlach-Barklow Co., Joliet, Ill.

Introduces Ektar Lens

Victor W. Hurst, manager, Graphic Arts Div., Eastman Kodak Co., was on the program to introduce the new Ektar Lens, developed by the company. Several slides were projected on a screen showing the manner in which the lens could be set percentage-wise for any specified enlargement or reduction of copy to be reproduced. The picture showed how the F numbers were evenly spaced to facilitate the operation of the Lens. Rare earth is said to have been used in the manufacture of the lens, instead of sand, which improves quality of impression transmitted to the plate, and which minimizes glare. The lens also covered wider plate range. Mr. Hurst direct a attention of the audience to the showing of the new lens at the exhibit booths of the company in the gallery rooms.

Experts Answer ?s

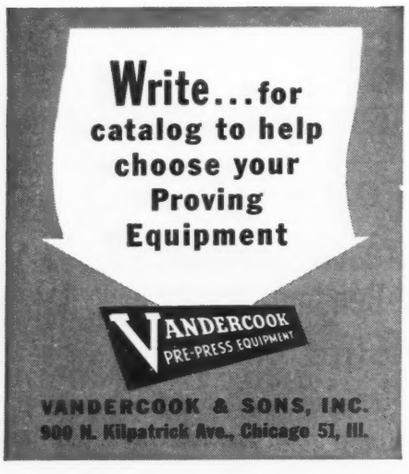
MOST of the questions which had been sent in to the "experts" previous to the question and answer session were answered by Mr. Bruno, after they had been read by Albert Tucker, president, National Association of Litho Clubs, who is associated with the Saul Lithograph Co., Washington, D. C.

One of the first questions caused Mr. Bruno to remind the audience that the whole process of lithography was based on the fact that oil and water do not mix, but that when any condition arises that causes the two substances to mix, there is trouble.

Zinc Becoming Scarce

The answer was "No" to the question concerning the use of infra-red lamps in drying zinc plates. Mr. Bruno advised that the drying process should be done fast with the use of a fan, so that the whole procedure will not take more than 5 min. He remarked that if water evaporates slowly on the plates, corrosion begins.

Commenting upon the subject of zinc, he said it is fast becoming a rare metal, and that its use is being curtailed in many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lines so that it can be used for lithographic purposes.

Use Good Inks

He advised the use of good inks for lithographic printing which give less trouble to the pressman, the poorer inks being more costly by reason of difficulties encountered in the running of a job. He also advised that only enough ink be permitted in the fountain for an hour's run of the job.

Numerous questions had to do with litho plate making. Reference was made to the fact that all plates look good until defects are revealed when on the press because proving methods before plates are positioned on the press have not been developed to give complete information concerning printing qualities. More accurate means of proving are being sought.

Sensitivity of Plates

Mr. Bruno in answering one question about sensitivity of plates and coating thickness, indicated that there were numerous factors that influenced sentitivity, mentioning relative humidity as only one of about 40 factors. He said that the Lithographic Technical Foundation is planning to issue a bulletin on the subject. Concerning the use of cellulose gum in the pressroom, the answer was that it is not used so much there as in the platemaking department for desentizing litho plates.

Conditioning Paper

Professor Reed answered questions concerning the behavior of paper and advised control of atmospheric conditions in the pressroom as an important factor in obtaining good results in registering successive impressions on a sheet. Several of the experts commented upon this subject, they making a distinction of air conditioning of a plant and the seasoning of paper. The comment was made that in air conditioned plants, a separate room is usually used for the seasoning of the paper. In answer to how long it should be seasoned, it was said until wavy edges become straight. It was apparent that no uniform plan is in use in plants. Various bulletins of the LTF were mentioned as containing information concerning specific problems and methods to solve them.

Mask for Color Correction

Mr. Preucil answered questions concerning photography. He advocated the masking method of correcting color plates but remarked that there is still a lot of correction being done by the hand retouching method which is not as accurate as mechanical and photographic methods. He described briefly the method of masking from continuous-tone color-separation negatives and the use of positives.

Questions concerning piling of litho inks viscosity and other factors that affected press operations were answered by M. Grunder of International Printing Ink Corp.

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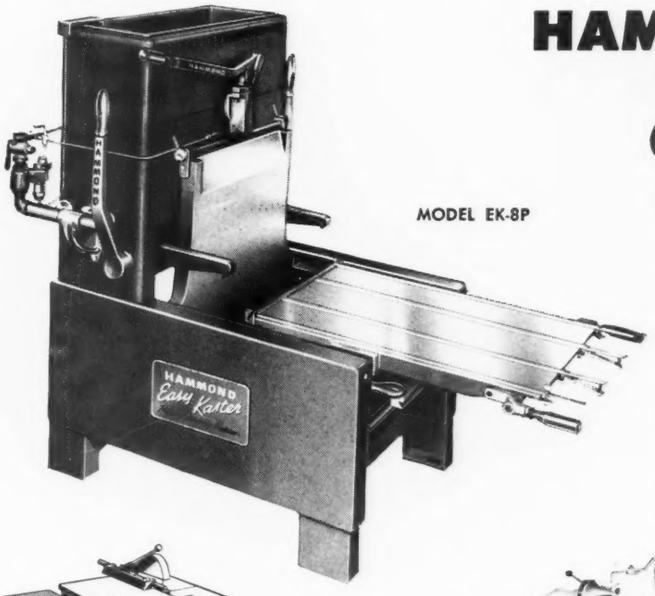

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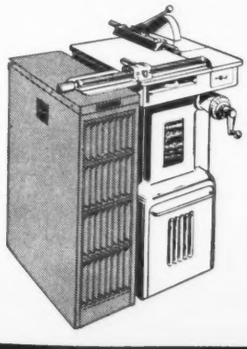

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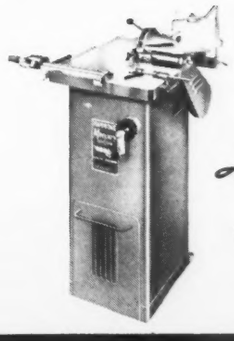

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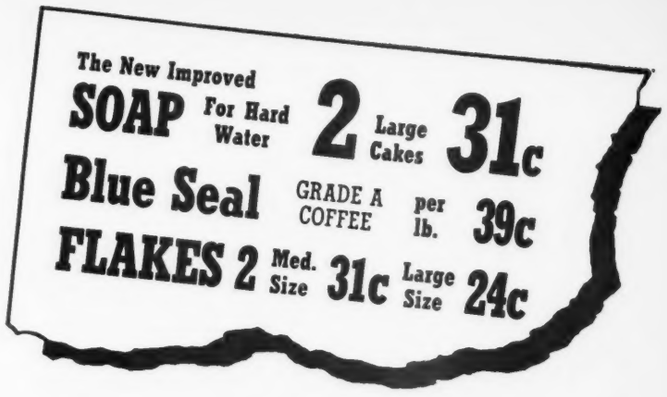
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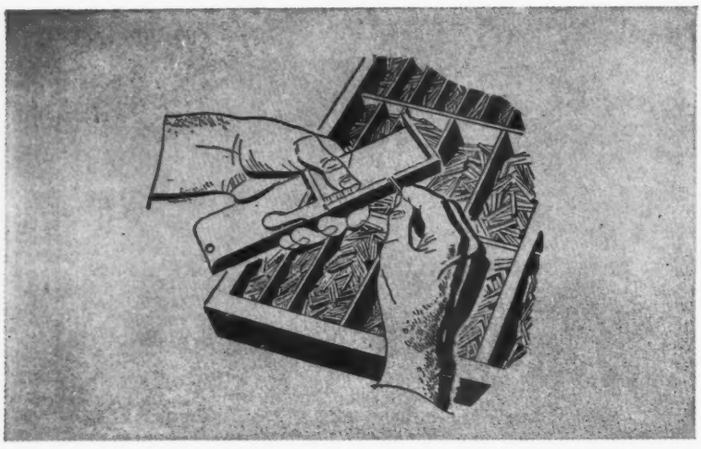

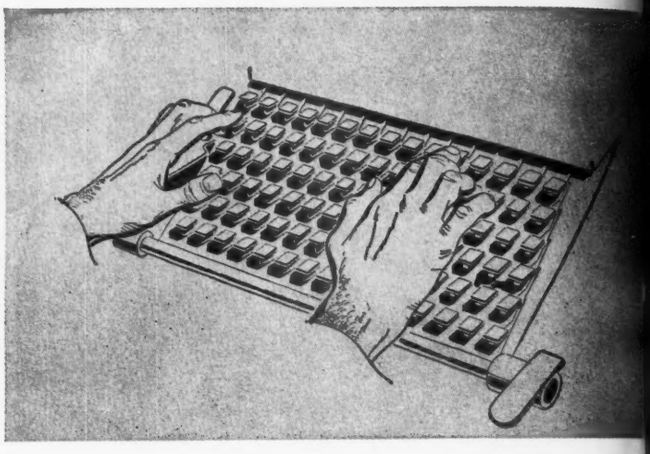

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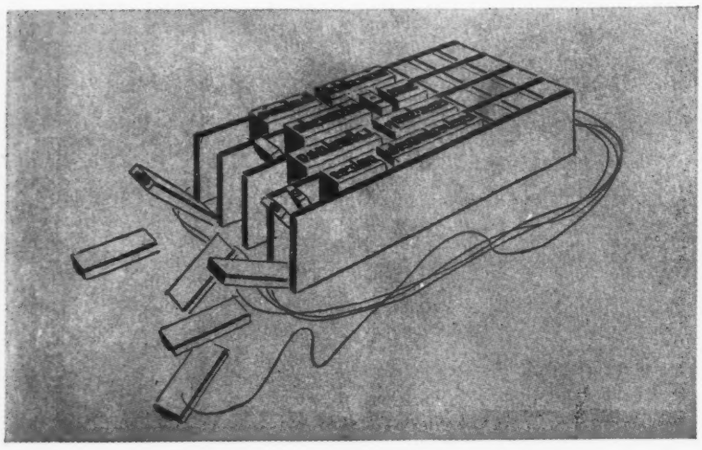

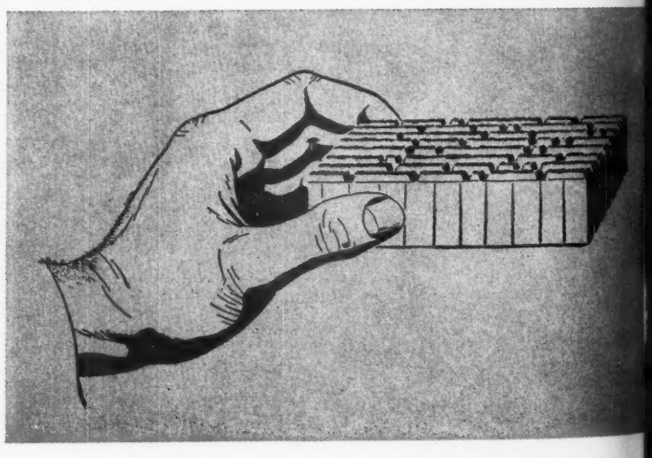

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